GOVERNMENT OF TRIPURA
DEPARTMENT OF LABOUR
(FACTORIES & BOILERS ORGANISATION)

No.F.7(42)-FB/TFR/97(P)/1554

Dated, Agartala, the 7th July, 2007. **NOTIFICATION**

In exercise of the powers conferred by Section 112 of the Factories Act, 1948 (63 of 1948) the Government of Tripura, having received no objection or suggestion in respect of the draft Rules – "Tripura Factories Rules, 2007" published in the extraordinary issue of Tripura Gazette dated 3rd April, 2007 under Notification No.

No.F.7(42)-FB/TFR/97(P) dated 30th March, 2007 in the Department of Labour (Factories & Boilers Organisation) as required by Section 115 of the said Act, makes the Rules appended herewith.

By order of the Governor,
Sd/-
(H.Debbarma)
Deputy Secretary to the
Government of Tripura

TRIPURA FACTORIES RULES, 2007

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Chapter I
Preliminary

Rule 1. Short title, extent and commencement:

1)These rules may be cited as the Tripura Factories Rules, 2007.

2)These rules shall extend to the whole of Tripura.

3)Save as otherwise expressly provided elsewhere in these rules, these rules shall come into effect from the date of publication in the Official Gazette.

Rule 2. Definition: - In these rules unless there is anything repugnant in the subject, or context: -

a)"Act" means the Factories Act, 1948.

b)"Appendix" means an appendix appended to these rules;

c)"Artificial humidification" means the introductions of moisture into the air of a room by any artificial means whatsoever, except the unavoidable escape of steam or water vapour into the atmosphere directly due to a manufacturing process;

Provided that the introduction of air directly from outside through moistened mats or screens placed in the openings at times when the temperature of the room is 26.5o Celsius/ Centigrade or more shall not be deemed to be artificial humidification;

d)"Belt" includes any driving strap or rope;

e)"Degree" (of temperature) means degrees on the Centigrade/ Celsius scale; f)"Family" means the wife and dependent children;

g)"Form" means a form appended to these rules;

h)"Fume" includes gas or vapour;

i)"Health Officer" means the Municipal Health Officer or District Health Officer or such other official as may be appointed by the State Government in that behalf;

j)"Hygrometer" means an accurate wet and dry bulb hygrometer conforming to the prescribed conditions as regards construction and maintenance;

k)"Inspector" means any Inspector appointed under the Act and includes the Chief Inspector of Factories and the District Magistrate. ı

l)"Local Authority" means Commissioner in case of an area within the limits of a municipality or Corporation or the Administrator appointed by the Government in the absence of any elected body in the municipality or corporation, the Executive officer in case of an area within the jurisdiction of panchayat or the member secretary of an area within the jurisdiction of notified area authority as the case may be.

m)"Manager" means the person responsible to the Occupier for the working of the factory for the purpose of the Act & Rules;

n)"Maintained" means maintained in an efficient State, in efficient working order and in good repair;

o)"Official gazette" means the Tripura Gazette;

p)"Public Health Authorities" means the local Health Officer having jurisdiction over the area.

q)"Septic tank latrine" means a latrine of the septic tank type, together with its filter beds, and includes, activated sludge latrines and aero-bacterial latrines.

r)"Section" means a section of the Act.

Rule 3. Competent Person. (i) The Chief Inspector may recognise any person as a'competent person' within such area and for such period as may be specified for the purposes of carrying out test, examinations, inspection and certification for such buildings, dangerous machinery, hoists and lifts, lifting machines and lifting tackles, pressure plants, confined space, ventilation system and such other process or plant and equipment as stipulated in the Act and

the Rules made there under, located in a factory, if such a person possesses the qualification, experience and other requirements as set out in the schedule annexed to this Rule.

Provided that the Chief Inspector may relax the requirements of qualifications in respect of a 'competent person' if such a person is exceptionally experienced and knowledgeable, but not the requirements in respect of the facilities at his command.

Provided further that where it is proposed to recognise a person employed under the Chief Inspector as a 'competent person', concurrence of the State Government shall be taken and such a person after being so recognised, shall not have powers of an 'Inspector'.

Provided further that the 'competent person' recognised under the provision shall not be above the age of 62 and shall be physically fit for the purpose of carrying out the test, examination and inspection.

[1] Third Amendment vide No.F.7(121)-FB/AM/2007/2098 dtd., 22.09.2014 and Repealed vide No.F.7(121)-FB/AM(Vol.-II)/2007/1392-1402 dtd., 04.08.2016.

2)The Chief Inspector may recognise an institution of repute, having persons possessing qualifications and experience as set out in the schedule annexed to sub-rule (1) for the purpose of carrying out test, examinations, inspections and certification for buildings, dangerous machinery, hoists and lifts, lifting machines, and lifting tackles, pressure plant, confined space, ventilation system and such other process or plant and equipment as stipulated in the Act and the Rules made there under, as a 'competent person' within such area and for such period as may be specified.

3)The Chief Inspector on receipt of an application from a person or an institution in,

Form 1 or Form 2 asthe case may be, intending to be recognised as a 'competent person' for the purposes of this Act and the Rules made there under, shall register such application and within a period of sixty days of the date of receipt of application, either after having satisfying himself as regards competence and facilities available at the disposal of the applicant recognise the applicant as a 'competent person' and issue a certificate of competency in Form –3 or reject the application specifying the reasons there for.

4)The Chief Inspector may, after giving an opportunity to the competent person of being heard, revoke the certificate of competency

i)If he has reason to believe that a competent person

a)has violated any condition stipulated in the certificate of competency; or

b)has carried out a test, examination and inspection or has acted in a manner inconsistent with the intent or the purpose of this Act or the Rules made there under; or has omitted to act as required under the Act and the Rules made there under; or

ii) for any other reason to be recorded in writing.

Explanation : For the purpose of this Rule, an institution included an organisation.

5)The Chief Inspector may, for reasons to be recorded in writing, require re-certification of lifting machines, lifting tackles pressure plant or ventilation system, as the case may be which has been certified by a competent person outside the State.

Schedule

Sl. No.	Sec./ Rules under which competency is	Qualification required	Experience for the purpose	Facilities at his command
1.	Rules made under Sec. 6 and Sec112- Certificate of stability for buildings.	At least Degree in Civil or Structural Engineering; or equipment.	**i)** A minimum of 10 yrs experience in the design or construction or testing or repairs of structures; **ii)** Knowledge of non-destructive testing, various codes or practices that are current and the effect of the vibrations and natural forces on the stability of the building; and	
			regard to the safety of the structure or the building.	
2.	Rules made under Sec 21(2) Dangerous Machines.	At least Degrees in Electrical or Mechanical or Textile Engineering or Equivalent.	**i)** A minimum of 7 yrs experience in **a)** design or operation or maintenance; or **b)** testing, examination of relevant machinery, their guards, safety devices and appliances. **ii)** He shall – **a)** be conversant with safety devices and their proper functioning. **b)** be able to identify defects and any other cause leading to failure; and **c)** have ability to arrive at a reliable conclusion with regard to the proper	Gauges for measurement; instruments for measurement of speed and any other equipment or device to determine the safety in the use of the dangerous machines.

3.	Section 28 Lifts and Hoists	At least degree in electrical and or Mechanical Engineering or its equivalent	**i)** A minimum experience of 7 years in **a)** design or erection or maintenance or **b)** inspection and test procedures; of lifts and hoists **ii)** He shall be – **a)** conversant with relevant codes of practices and test procedures that are current; **b)** conversant with other Lifts. statutory requirements, covering the safety of the Hoists and lifts; **c)** able to identify defects	Facilities for load testing, gauges equipment/gadgets for measurement and any other equipment required for determining the safe working conditions of Hoists and Lifts.
4.	Section 29 Lifting machinery and lifting Tackles	At least degree in Mechanical Engineering or Electrical or Metallurgical	**i)** A minimum experience of 7 years in - **a)** design or erection or maintenance **b)** testing, examination and inspection, of lifting	Facilities for load testing, tensile testing, heat treatment, equipment/ gadget for
		Engineering or its equivalent.	and lifting tackles; **ii)** He shall be – **a)** conversant with the relevant codes of practices and test procedures that are current; **b)** conversant with manufacture of machines and metallurgy of the material of construction; **c)** conversant with heat treatments / stress relieving techniques as applicable to stress bearing components and lifting tackles; **d)** Capable of identifying defects and arriving at a reliable conclusion with	gauges and such other equipment to determine the safe working conditions of the lifting machinery, tackle.

5.	Section 31 – "pressure plant"	At least Degree in Chemical or Electrical or Metallurgical or Mechanical Engineering or its equivalent.	**i)** A minimum experience of 10 years in – **a)** design or erection or maintenance, or **b)** testing, examination and inspection, of pressure plants. **ii)** He shall be – **a)** conversant with the relevant codes of practices and test procedures relating to pressure vessels; **b)** conversant with statutory requirements concerning the safety of unfired pressure vessels and equipment operating under pressure; **c)** conversant with non-destructive testing techniques as are applicable to pressure vessels ; **d)** able to identify defects	Facilities for carrying out hydraulic test, non-destructive gauges equipment/ gadgets for measurement and any other equipment or gauges to determine the safety in the use of pressure vessels.
6.	i) Section-36 precautions against dangerous fumes. ii) Rules made under Sec 41 & 112 concerning ship building and ship repairs.	At least Master's Degree in Chemistry, or a degree in Chemical Engineering.	**i)** Minimum of 7 years in collection and analysis of environmental samples and calibration of monitoring equipments; **ii)** He shall – **a)** be conversant with the hazardous properties of chemicals and their permissible limit values; **b)** be conversant with the current techniques of sampling and analysis of the environmental contaminants and **c)** be able to arrive at a reliable conclusion as regards the safety in	Meters, instruments and devices duly calibrated and certified for carrying out the tests and certification of safety in working in confined spaces.

7.	Ventilation systems as required under various schedules framed under Section –87. such as Schedules for – **i)** Grinding or glazing of metals and processes incidental thereto, **ii)** Cleaning or smoothing, roughening etc. of articles, by a jet sand, metal shot, or grit or other abrasive **iii)** Handling and processing of asbestos, **iv)** Manufacture of Rayon by viscose process, **v)** Foundry	At least Degree in Mechanical or Electrical Engineering or equivalent	**i)** A minimum of 7 years in the design, fabrication, installation, testing of ventilation system and systems used for extraction and collection of dust, fume and vapours and other ancillary equipment. **ii)** He shall be conversant with relevant codes of practice and tests procedures that are current in respect of ventilation and traction system for fumes and shall be able to arrive at a reliable conclusion with regard to effectiveness of the system.	Facilities for testing the ventilation system instruments and gauges for testing the effectiveness of the extraction systems for dusts, vapours and fumes and any other equipment needed for determining the efficiency and adequacy of these systems. He shall have the assistance of a suitable qualified technical person who can come to a reasonable conclusion as to the adequacy of the system

Rule 3A

Authorized Person: (1) Third party inspection & certification for factories, registered under the Factories Act, 1948 & Rules made thereunder in the State of Tripura, as optional beyond the inspection by the department by recognition of the Authorized Person having the following qualification & experience:-

(i)At least a Bachelor Degree in Mechanical or Electrical or Chemical Engineering from a recognized University or equivalent,

(ii) Minimum 6(six) years experience in production/ maintenance/ Safety Departments in factory of repute, Or,

Minimum 5(five) years experience in a responsible position in factories inspection works

under the Directorate of Factories of any State / Central government.

(iii) Desirable: Knowledge of Bengali /local language;

(2) The person having above credentials may apply along with ail documents to the Chief Inspector, Factories & Boilers Organisation, Govt. of Tripura for grant of recognition as "Authorized Person" to perform third party inspection and certification for medium risk factories where workers are less than 50(fifty);

(3) The Occupier / Manager of such factory may engage such "Authorized Person" far carrying out the inspection of his/her factory as above in regard to Safety, Health, Welfare & Wages of the workers and issue the certificate by "Authorized Person" so far as the matter contained in Schedule I, II & III annexed herewith, to be handed over to the factory management with a copy within 24 hours to the respective Inspector of Factories, Government of Tripura far the purpose of record and far uploading in the portal;

(4) The Occupier / Manager may apply to an "Authorized Person" to carry out the inspection & certification of his/her factory, situated in Tripura State with a copy to the respective Inspector of Factories by duly paying the prescribed fee of factory, if any. Inspector of Factories will scrutinize the application etc. and approve within 7(seven) working days and from the date of receipt of such approval, inspection of factory should be completed within next I5 (fifteen) days."

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[1]Ninth Amendment vide No.F.2(345)-FB/EoDB(Vol.-II)2015(Part)/1456-57 dated 09.10.2020

Rule 4. Submission of plan

The Chief Inspector of Factories may require for the purposes of the Act, submission of plans and layout of plant & machinery of any factory. Such plans shall be drawn to the scale, showing –

a)the site of the factory and immediate surroundings including adjacent buildings and other structures, roads, drains etc;

b)the plan, elevation and necessary cross sections of the factory buildings indicating all relevant details relating to natural lighting, ventilation and means of escape in case of fire, and the position of the plant and machinery, aisles and passage ways; and

c)such other particulars as the State Government or the Chief Inspector, as the case may be, may require.

Provided that, for the purpose of this rule, any plan, layout or drawing, prepared for submission, should conform to the detailed guidelines to be issued by the State Government in this regard from time to time, which shall be notified in the official Gazette.[1]

Rule 5. Approval of site, construction or extension of factory building/ shed and layout of plant & machinery in a factory.

1)No site shall be used for the location of a factory or no building or work shed or structure shall be constructed, re-constructed, or extended for use as a factory or part of a factory or no building, part of building or structure already in existence in any site can be taken into use as a factory or part of factory or no installation of any plant or machinery shall be carried out in a factory unless previous permission in writing is obtained from the Chief Inspector. Previous permission of the Chief Inspector shall also be obtained for the installation of additional machinery.

2)Application for such permission shall be made in Form 5 in triplicate along with a fee of Rs. 150/- [2] to be deposited through Treasury Challan and shall be accompanied by the following documents;

a)A Flow Chart of the manufacturing process supplemented by a brief description of the process in its various stages, list of the raw materials to

be used, raw materials likely to be stored at a time, intermediate products including emission of Toxic Gases etc., finished products, by-products, their quantities, method of storage and handling, loading, transportation and details of arrangements for the disposal of trade waste and effluent, likely hazards involved in the process or with the raw materials and Plans products and the methods of controlling or eliminating them.

b)in triplicate drawn to scale showing;

i)Site of the factory and its surroundings including adjacent building and other structures, roads, drains etc.

ii)The plan, elevation and necessary cross sections of the various buildings indicating all relevant details relating to ventilation and means of escape in case of fire. The plan shall also clearly indicate the position of the plant and machinery, aisles and passage ways.

c)If the applicant is a company, public limited or private limited or partnership firm or a co-operative society, list and addresses of the persons in the board of directors, partners or members of the society as the case may be shall be submitted by the applicant duly authenticated by authority

[1]Second Amendment vide No.F.7(121)-FB/AM/2007/1400 dtd., 13.08.2013. [2]Fifth Amendment vide No.F.7(121)-FB/AM(Vol.-II)/2007/1452 dtd., 06.08.2016.

competent to do so along with concerned articles of memorandum, partnership deed etc. as the case may be.

d)Attested copies of Citizenship Certificate or Permanent Resident Certificates issued by the authority of the place/ states to which the applicant belongs or from notary public, need be submitted.

e)Such other particulars as the Chief Inspector of Factories may require - provided that Chief Inspector of Factories may exempt submission of plan and plant & machinery drawing incase of any factory or class of factories declared under section 85 of the Act.

3)If the Chief Inspector of Factories is satisfied that the plans are in consonance with the requirements of the Act, he shall subject to such condition as he may specify, approve them by signing and returning to the applicant one copy of each plan or he may call for such other particulars as he may require to enable such approval to be given.

Provided that no place or site shall be dis-approved unless the applicant is given an opportunity to be heard and that the Chief Inspector of Factories or the State Government as the case may be has reasons thereafter to be recorded in that behalf.

4)No deviation of any kind from approved plans shall be made without the written permission of the Chief Inspector of Factories.

5)No plant or machine or prime mover or permanent fixture not shown in the plans approved by the Chief Inspector of Factories shall be installed, fixed or used in any factory except in replacement of any machine, prime mover or permanent fixture not occupying more floor area than that already shown in the approved plan.

The plans approved by the Chief Inspector of Factories under this rule shall be readily available in the factory for inspection by the Inspectors and Addl. Inspectors appointed under Section 8 of the Act.

Rule 6. Certificate of Stability

1)No manufacturing process shall be carried on in any building of a factory constructed, re-constructed or extended or in any building which has been taken into use as a factory or part of a factory until a certificate of stability in Form 4 in respect of that

building has been sent by the occupier or manager of the factory to the Chief Inspector and accepted by him.

2)The certificate of stability referred to sub rule (1) shall be signed by a competent person provided that for the factories which are in-existence on the date of notification of this rule, the certificate of stability in

Form 4 may be sent to the Chief Inspector of Factories or Area Inspectors within 3 months from the date of notification; provided further that, no manufacturing process shall be carried out in any premises of a factory unless a fresh certificate of stability in Form 4 is obtained from a competent person once in each period of 4 years or after extension, alternation, repairs or addition or any work of engineering construction or replacement or addition of machinery plant etc. and sent to Chief Inspector.

Provided also that the forgoing provisions are without prejudice to the provisions of section 39 and 40 of the Act.

3)The Chief Inspector of Factories may however exempt any factory from submission of certificate of stability.

Explanation "Work of Engineering Construction" means any building, tank silo, scaffold, platform, chimney, bridge, supporting structural work retaining wall or any similar structure.

Rule 7. Application for Registration and grant of license

1)The occupier of every factory shall submit to the Chief Inspector an application for registration and grant of licence and ‘Notice of Occupation’ in

Form 6 in triplicate.

Provided that the occupier of premises already in use as a factory on the date of commencement of these rules shall submit such application within 30 days from the date of commencement of these rules.

Provided further that the occupier or manager of a place to which the provisions of the Act are made applicable by a notification under section 85 of the Act shall submit an application within 30 days of the date of that notification.

2)The fees payable for the registration and grant of license to a factory shall be as specified in the schedule A, B & C given herein after.

Schedule A[1]

Fees payable for grant of Factory Licence and renewal of Factory Licence for all factories (Except Power Generating Stations and Electrical Sub Stations)

Person to be employed on any day during the year	Quantity of Horse Power installed (Maximum HP) Fee in Rs.								
From To	HP Nil	Up to 10 HP	11-50 HP	51 – 100 HP	101– 250 HP	251– 500 HP	501 – 1000 HP	1001-5000 HP	above 5000 HP
Up to 9	150	225	375	750	1125	2250	3000	4500	6000
10 to 20	300	450	750	1125	2250	3000	4500	6000	7500
21 to 50	450	750	1350	2250	3000	4500	6000	7500	9000
51 to 100	1125	1500	2250	3000	4500	6000	7500	9000	10500
101 to 250	1500	2250	3000	4500	6000	7500	9000	10500	12000
251 to 500	2250	3000	4500	6000	7500	9000	10500	12000	13500
501 to 750	3000	4500	6000	7500	9000	10500	12000	13500	15000
751 to 1000	4500	6000	7500	9000	10500	12000	13500	15000	16500
1001 to 1500	6000	7500	9000	10500	12000	13500	15000	16500	18000
1501 to 2000	7500	9000	10500	12000	13500	15000	16500	18000	19500
Above 2000	9000	10500	12000	13500	15000	16500	18000	19500	21000

[1]Fifth Amendment vide No.F.7(121)-FB/AM(Vol.-II)/2007/1452 dtd., 06.08.2016.

Schedule B[1]

Fees payable for grant of Factory Licence and renewal of Factory Licence for Electricity Generating Station only.

Maximum no. of persons to be employed on any day during the year	Installed capacity of the generating station including auxiliary units (in KW) Fees in Rs.									
From To	Upto 50 KW	51-100 KW	101-200 KW	201-500 KW	501-1000 KW	1001-5000 KW	5001-10000 KW	10001-50000 KW	50001-100000 KW	Above 100000 KW
Up to 20	750	1125	2250	3000	4500	6000	15000	16500	19500	22500
21 to 100	1125	2250	3000	4500	6000	7500	16500	19500	22500	25500
101 to 300	2250	3000	4500	6000	7500	9000	19500	22500	25500	30000
301 to 600	3000	4500	6000	7500	9000	10500	21000	25500	30000	37500
601 to 1000	4500	6000	7500	9000	10500	12000	24000	30000	37500	45000
above 1000	6000	7500	9000	10500	12000	13500	30000	37500	45000	54000

Schedule C

Fees payable for grant of Licence and renewal of Licence for Electricity transforming and transmitting station or Sub-station only.

Maximum No of workers to be employed	Installed Transformer Capacity of the Transforming Stations/ employedSub-Stations including auxiliary unit if any in KVA	
From To	Up to 100	Above 100000
Up to 20		
21 to 100		

[1]Fifth Amendment vide No.F.7(121)-FB/AM(Vol.-II)/2007/1452 dtd., 06.08.2016.

3)Every application in Form 6 shall be accompanied by a treasury challan in original evidencing payment of appropriate fees prescribed for the purpose.

Rule 8. Grant of License

1)The Chief Inspector may on the application being made to him under sub-rule

(1)of Rule 7 and on payment of fees prescribed in sub-rule (2) of that Rule and on being satisfied that there is no objection to the grant of licence applied for, register the factory and grant a licence in

Form 7 to the applicant for using the premises described in the licence as the factory.

Provided that the Chief Inspector may call for such other particulars as he may require before register or grant of licence.

Provided further that the Chief Inspector may register and grant licence subject to such conditions as he may consider necessary and which shall be satisfied in the licence.

2) The Chief Inspector may refuse to register and grant or renew a licence if he is satisfied-

i)that an application is not accompanied by plans -

a)of the site on which the factory is to be situated, and

b)for the construction or extension of the factory;

ii)that the plans so submitted have not been approved by the Chief Inspector.

iii)that the factory has not been constructed in accordance with the plans approved by the Chief Inspector or in compliance with the conditions subject to which the plans are approved;

iv)that material requirements of the relevant provisions specified in Rule 160 in relation to the factory concerned have not been complied with; or

v)that there is imminent danger to life of workers working in the factory due to explosive or inflammable dust, gas or fumes and effective measures in his opinion have not been taken to remove the danger.

vi)that the details of the raw materials, intermediate products, finished products, quantities, methods of storage, hazards, safety measures, arrangements for disposal of trade-wastes and effluents, etc. have not been furnished.

vii)for any other reasons to be specified by him.

3) Subject to the provisions herein after contained with respect to suspension and revocation and unless earlier renewed under rule 8 every such licence shall remain in force till the 31st day of December next and shall then expire.

Rule 9. Renewal of licence

1)A licence granted under Rule 8 may be renewed by the Chief Inspector of Factories.

2)Every licence granted under the provision of Rule 8 shall be got renewed by the occupier for every calendar year following the year of registration and grant of licence.

3)An application for renewal of licence shall be made in Form 6 in triplicate accompanied by the treasury challan in original evidencing payment of renewal fees specified in the schedule attached to Rule 7 so as to reach by 1st November of the year in which the licence is due to expire.

Provided that in case of a licence granted to a factory on or after 1st day of October in any year, the application for renewal of the licence shall be made on or before the 31st day of January of the next year.

4)The original copy of the factory licence granted under Rule 7 shall be enclosed with the application referred to in sub-rule (2) above.

5) a) On receipt of application duly filled in and completed in all respects under sub-rule (2), the Chief Inspector may, on being satisfied that there is no objection to renewal of the licence, renew the same for a period not exceeding 10(ten) years1 or may, after recording reasons refuse the renewal thereto on any grounds specified in the proviso to sub-rule (2) of Rule 8.

b)The Chief Inspector may also refuse the renewal of the licence on the grounds that the applicant has been guilty of repeated contraventions of the provisions of the Act or this rules or both, or applicant has obtained the licence by fraud or by mis-representation.

Provide that in any case falling under clause (a) or (b) before refusing renewal of licence, the applicant may be given opportunity to show cause why the renewal of licence should not be rejected.

6) The same fee shall be charged for the renewal of licence as for the grant thereof.

Provided where the application for renewal of the licence is made after the expiry of the due date specified in the sub-rule (3), the additional graded fees on the percentage of the fees ordinarily payable for the renewal of the licence as specified in Column 2 of the schedule thereto shall be payable for such renewal of licence for the period of delay as specified in column of that schedule.

Schedule

Period of Delayed Submission	% of Fees
After 1st November but by 30th November	25%
After 30th November but by 31st December	50%

Provided further that if the application for renewal is received after the expiry of the licence, the additional fee payable will be on the following rates notwithstanding any other legal actions that may be taken against the applicant.

a)75% of the fees ordinarily payable if the application is made by 31st March of the year following the year in which the licence expires.

b)100% if the application for renewal is made after 31st March of the year following the year in which the licence expires.

Provided further that if part of the renewal fee is paid within the due date then the additional fee shall be payable only on the balance due.

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[1]Fourth Amendment vide No.F.7(121)-FB/AM(Vol.-II)/2007/2878-87 dtd., 29.03.2016.

7)If any amount depositing by due date is less than the prescribed renewal fee, the balance amount of fee along with additional fee calculated on the total fee ordinarily payable in addition with the percentage specified in sub rule 6 shall be payable.

8)Every licence renewed under these rules shall remain in force up to 31st December of the year for which it is renewed.

Rule 10. Adjustment of excess payment of licence fee.

Where the amount is paid in excess of the prescribed fee for the grant of the licence or for the renewal of the licence, the excess amount so paid may be adjusted towards the fee payable for renewal of the licence for the subsequent year by the Chief Inspector at his own discretion on request.

Rule 11. Amendment of licence.

1)A licence granted under Rule 8 or renewed under Rule 9 may be amended by the Chief Inspector.

2)A licencee shall be required to have his licence amended if there is any change in the name of the factory or in the site on which the factory is situated or if the factory for which the licence granted exceeds the limits specified in the licence in regard to the HP or KW or KVA as the case may be or number of persons to be employed provided that no amendment of licence shall be necessary in respect of changes of the Number of Workers or HP or KW or KVA or all unless such changes involved any change in the existing licence or renewal fee.

3)A licensee whose licence is required to be amended shall submit to the Chief Inspector an application in

Form 6 for this purpose stating the reasons separately. In case there is any change of site, the applicant shall also submit new site plan as also plan drawing for approval of the Chief Inspector.

4)The Chief Inspector of factories may call for such other particulars as he may require for amendment of the licence.

5)An application for amendment for a licence shall be submitted to the Chief Inspector of Factories atleast within 30 days prior to the date on which the applicant desires the amendment to take effect. The application shall be accompanied by the original licence and the Treasury Challan in original evidencing payment of the fee prescribed for the amendment.

6)The fees for the amendment of a licence shall be Rs. 150/-ıplus the amount if any by which the fee, that would have been payable if the licence had originally been issued in the amended form, exceeds the fee originally paid for the licence.

Provided that if the limits specified in the licence is exceeded or the name of the factory or the site on which it is situated is changed without making the application as aforesaid, notwithstanding any legal action which may be taken against the occupier, the licence shall be amended only on payment of a fee of 100% in excess of the fee originally payable under sub rule 6 for getting the licence amended.

ıFifth Amendment vide No.F.7(121)-FB/AM(Vol.-II)/2007/1452 dtd., 06.08.2016.

7)On receipt of such application together with the documents evidencing deposit of the prescribed fee, the Chief Inspector may grant amendment and the licence thus amended, be returned to the applicant. The amendment shall be incorporated in the appropriate columns of the original licence under the dated signature of the Chief Inspector and the licence thus amended, be returned to the applicant. The amendment shall take effect from the date on which it is amended.

8)

Provided that if an application for amendment is refused, the reasons for the same shall be recorded and communicated to the applicant.

Rule 12. Transfer of Licence

1)The licence granted under Rule 8 may be transferred by the Chief Inspector.

2)The holder of a licence may at any time before expiry of licence apply for permission to transfer the licence to another person.

3)Such application for transfer shall be made to the Chief Inspector and should be accompanied by original licence and documents in original in proof of payment of fees prescribed for the transfer.

4)The fee for transfer shall be 25% of the fees originally payable for the grant or renewal of the said licence subject to a minimum of Rs.150/- and maximum of Rs. 750/-ı.

5)The transfer of licence shall take effect only if the Chief Inspector approves the transfer and enters the same in the licence under his dated signature. The person likely to take over on transfer shall not take over the management of the factory before getting the written approval of the Chief Inspector or receipt of the Licence thus transferred, whichever is earlier.

Provided that if the transfer of a licence is due to change of occupiership due to purchase of the factory by the transferee from the licensee, due to gift by the licensee to the transferee, the transferee/ purchaser shall intimate the fact to the Chief Inspector and Inspector of the area along with certified copy of the deed of purchase or gift within 15 days from the date on which the deed has been executed.

6)The Chief Inspector may call for any other particulars as he may require for consideration of the prayer for transfer of licence.

Rule 13. Procedure on death or disability of a licensee.

If a licensee dies or becomes insolvent or otherwise disabled, a person carrying on the business of such licensee if any shall not be liable to any penalty under the Act for continuing the manufacturing process as granted to the licensee by the licence during such time as may reasonably be required to allow him to make an application for amendment/ transfer of the licence under the Rule 12 in his own name for the unexpired portion of the original licence.

Provided that the said person carrying on the business is to furnish relevant documents in support of insolvency, death or disability of the original licensee to the satisfaction of the Chief Inspector.

Rule 14. Loss of license.

Where a license granted under this rule is lost or accidentally damaged or destroyed, a duplicate may be issued on an application made by the licensee to the Chief Inspector in plain paper and on payment of a fee @25% of the license fee subject to a maximum of Rs. 750/- and minimum of Rs. 150/-[1].

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[1]Fifth Amendment vide No.F.7(121)-FB/AM(Vol.-II)/2007/1452 dtd., 06.08.2016.

Rule 15. Mode of payment of fees.

1)Every application under the rule shall be accompanied by a Treasury Challan in original showing that the appropriate amount of fee has been paid into the local Treasury/ Sub-Treasury under the head of Account "0230-Labour & Employment, 104 - fees realised under the Factories Act".

Provided further that when the Head of Account under which the fees have to be deposited in changed, the Chief Inspector may direct the occupiers to deposit fees payable under this sub-rule under changed Head of Account or such other Head of Account as he may specify.

2)If an application for grant, renewal, amendment or transfer of a license is rejected, the fee paid shall be refunded to the applicant.

Rule 16. Notice of Occupation

The notice of occupation shall be in

Form 6.

Rule 17. Suspension of license on request of licensee.

1)If before the 31st December of any year, an occupier notifies his intention in writing to the Chief Inspector that during the following year the premises in respect of which license has been issued will not be used for the working of the factory, the Chief Inspector may suspend the license granted in respect of that factory for such period as he thinks fit by necessary endorsement in the licence.

2)A license suspended under sub rule (1), may be renewed for the remaining part of the year on receipt of an application for renewal in

Form 6 accompanied by the license on payment of a surcharge of 10% in addition to the fees specified in Rule-8.

Rule 18. Revocation of license.

The Chief Inspector at any time before expiry of the period for which the license has been granted or renewed, may revoke the license on any of the grounds specified in sub-rule (2) of Rule – 8 or sub-rule (5) (a) of Rule 9.

Provided that before revocation of any license, the licensee shall be given an opportunity to show cause why the license should not be revoked.

Rule 19. Notice of change of Manager.

The Occupier of the factory shall send a notice of change of Manager in prescribed

Form 8 to the Inspector with a copy to the Chief Inspector within 7 (seven) days from the date on which such person takes over charge.

Rule 20. Display of license.

The license or zerox copy of the license properly bound with proper frame & glasses, shall be displayed at a conspicuous place in the office of the manager of the factory. Provided where there is no office of the factory manager within the premises of the factory, the license shall be displayed on a conspicuous place at the main entrance of the factory.

Rule 21. Prohibition to run a factory without registration or the valid Factory license - to be issued in case of failure to comply with any of the following.

1)The plans are to be got approved from the Chief Inspector in respect the following items, namely –

a)site on which the factory is to be situated.

b)buildings and extension used for the purposes of manufacturing process; c)The layout of plant and machinery, including the storages for raw materials and finished products, intermediate by-products;

d)any changes, total or partial in manufacturing processes.

2)The factory building, extensions, processes and machinery layout are to be in conformity with the approved plans;

3)The conditions subject to which plans are approved are to be compiled with; 4)A licence is obtained under rule 8 & 9 the said license is valid at the relevant time; 5)Necessary Certificates under Rule 29 are obtained;

6)The conditions subject to which the license is granted or renewed as the case may be are compiled with.

Provided that if an application for renewal of license or amendment of license or transfer of license has been submitted in forms & manner prescribed in these rules, the license shall be deemed to be renewed or transferred or amended until such date as the Chief Inspector grants or renews or amends or transfer the license or refuses in writing to grant, renew, transfer and amend the license as the case may be.

Rule 22. Guidelines, instructions and records.

1)Without prejudice to the general responsibility of the occupier to comply with the provisions of section 7 (A), the Chief Inspector may, from time to time issue guidelines and instructions regarding the general duties of the occupier relating to health, safety and welfare of all workers while they are at work in the factory.

2) The Occupier shall maintain such records as may be prescribed by the Chief Inspector of factories.

Rule 22A online application:

(1) An applicant may make an online application along with required documents, by online payment of fees, as prescribed under the rules, for the purpose of -

(a) approval of site, construction or extension of factory building/ shed and layout of plant & machinery in a factory.

(b) registration and grant of license of a factory.

(c) renewal of licence.

(d) amendment of licence.

(e) transfer of licence.

(2) (i) (a) For the purpose of making online application for clause (a) of sub-rule(1), the scanned copy of the documents mentioned in rule 5(2) shall be uploaded; (b) If the Chief Inspector of Factories is satisfied that the plans are in .consonance with

the requirements of the Act and rule, he shall subject to such condition as he may specify, approve them and shall upload the digitally signed or system generated copy of plan within 2l(twenty one) days;

(ii) For the purpose of making online application for clause (b) of sub-rule (1), the scanned copy of the following documents shall be uploaded -

(a) Filled up "Notice of Occupation" duly signed by the Occupier and Manager with date and seals respectively;

(b) Plan drawing of the factory and reference number of the approved plans, if deviated from the approved plan drawing;

(c) In case of any change in occupier, the relevant document relating to such change;

(d). A Self Certified compliance report on statutory provisions under the Act and rules, as prescribed by the Chief Inspector of Factories;

(e) Such other particulars as the Chief Inspector of Factories may require to enable such approval to be given;

(iii) On being satisfied with the online application and if there is no objection to the grant of licence applied for, the Chief Inspector of Factories shall register the factory and grant licence to the applicant for using the premises described in the licence and upload the digitally signed or system generated copy of license within30(thirty) days;

(3) On making an online application for renewal of licence, it shall be auto renewed within the timeline of 7(seven) days, if there is no objection to renew the licence;

(4) For the purpose of amending a licence under clause (d) of sub-rule (1), a licensee may make online application by uploading the scanned copy of the documents mentioned in rule 11(3) and the Chief lnspector shall grant the amendment and the licence thus amended, shall be uploaded with digital signature or system generated copy of it within 30(thirty) days, if there is no objection to amend the licence;

(5) For the purpose of transfer a licence under clause (e) of sub-rule (1), a licensee may make online application by uploading the scanned copy of the documents mentioned in rule 12(5) and the Chief Inspector shall grant the transfer and the licence thus transferred, shall be uploaded with digital signature or system generated copy of it within 30(thirty) days, if there is, no objection to transfer the licence;

(6) All the funds accrued towards the online payment of fees under this rule shall be deposited to the head of Account "0230-Labour & Employment, 104 - fees realised under the Factories Act;

(7) In case any revocation of licence under rule 18, the Chief Inspector of Factories shall upload the revocation in the system.

1Eighth Amendment vide No.F.2(345)-FB/EoDB(SRAP)/2020/1442-52 dated 19.10.2022

Chapter II

23	**Inspecting Staff**
24	**Powers of Inspector**
25	**Duties of Certifying Surgeon**

Rule 23. Inspecting Staff

Qualifications of an Inspector

1)No person shall be appointed as an Inspector for the purposes of the Act unless he possesses the following qualification:-

a)He must not be less than 27 years or more than 40 years of age. 1
b)He must have;
i)Secured a degree or its equivalent of a recognised university in the branches of Mechanical Engineering or Electrical Engineering or Chemical Engineering with experience of at least 5 years in any Factory Directorate or 6 years in production, maintenance or safety department of a factory / industrial establishment of repute.

Provided that in case of a person having diploma in Industrial Safety from any recognised university or institute in addition to degree in the said branches of Engineering, practical experience in a Factory Directorate or production, maintenance or safety department of a factory may be 4 years and 5 years respectively. Or 2

ii)In case of a Medical Inspector, a degree in Medicine of a recognised university with experience of at least 6 years in a public hospital or 5 years in the medical department of a reputed factory.

Provided that in case of a person having diploma in industrial health from a recognised institute or university in addition to degree in Medicine, practical experience in hospital or medical department of a factory may be 5 years and 4 years respectively.

c)Where for a particular post, special knowledge to deal with special problems is required, the Government may, in addition to the basic qualification, prescribe other appropriate qualifications for such a post.

2)The State Government may, however, change the period of experience from that prescribed in these rules in case of exceptionally qualified and otherwise suitable candidate.

Rule 24. Powers of Inspector

Notwithstanding the powers already conferred by Section 9 of the Act, an Inspector shall for the purpose of the execution of the Act, have the powers to do all or any of the following;

a)To photograph any worker, to inspect, examine, measure, copy, taking photograph, sketch or test as the case may be of any building or room, any plant, machinery, appliance or apparatus, any register or documents or anything provided for the purpose of securing the health, safety or welfare of the workers employed in a factory.

1&2 Third Amendment vide No.F.7(121)-FB/AM/2007/2098 dtd., 22.09.2014 and Repealed vide No.F.7(121)-FB/AM(Vol.-II)/2007/1392-1402 dtd., 04.08.2016.

b)In the case as Inspector who is a duly qualified medical practitioner to carry out such medical examination as may be necessary for the purpose of his duties as an Inspector.

c)To prosecute, conduct or defend before a court any compliant, or other proceeding arising under the Act or in discharge of his duties as an Inspector.

Provided that the powers of the District Magistrates and such other public officers as are appointed to be Additional Inspector shall, unless otherwise expressly provided in the notification under Sub-section (5) of section 8, be limited to the inspection of factories in respect of the following matters, namely: Cleanliness (section 11), Over-crowding (section 16), Lighting (section 17), Drinking water (section 18), Latrines and urinals (section 19), Spittoons (section 20), Precautions in the case of fire (section 38), Welfare (Chapter V), Working hours of adults (Chapter VI– except the power of exemption under the proviso to section 62), Employment of young persons (Chapter VII), Leave with wages (Chapter VIII) and Display of notice (section 108).

Provided further that –

i)The District Magistrate shall not pass any original orders or remarks under section 11, 17 and 38 of the Act but shall limit and confine his orders or remarks under those sections to the points to which the full time Inspector of Factories had already drawn the attention of manager or occupier of the factory, as the case may be.

ii) [1] All Additional Inspector shall report the defects found and remedies suggested for enforcing compliance with requirements of sections referred to above, to the Inspector of the area concern who shall pass final orders in each case.

d)In case the occupier or the manager or the person present on behalf of them in the factory fails to produce any prescribed register or other documents to the inspectors on demand during inspection, the inspector may pass necessary orders in writing to the occupier or manager or the person as mentioned above as the case may be for production of the registers and documents to him in his office on the date and time specified by him in the order.

e)Even if any complaint is received directly in respect of any factory, the powers of the Inspectors to conduct any other surprise inspection or complaint inspection is subject to having prior permission from the Head of Department, in writing.[1]

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[1]Seventh Amendment vide No.F.2(345)-FB/EoDB(Vol.-II)/2015(Part)/5005 dtd., 18.01.2020.

Rule 25. Duties of Certifying Surgeon.

1)For purpose of the examination and certification of young persons who wish to obtain certificates of fitness, the Certifying Surgeon shall arrange a suitable time and place for the attendance of such persons, and shall give previous notice in writing of such arrangements to the managers of factories situated within the local limits assigned to him.

2)The Certifying surgeon shall issue his certificates in

Form 10. The foil and counter foil shall be filled in and signature or the left thumb impression of the person in whose name the certificate is granted, shall be taken on them. On being satisfied as the person examined, he shall sign the foil and initial the counterfoil and shall deliver the foil to the person in whose name the certificate is granted.

The foil so delivered shall be the certificate of fitness granted under section 69.

All counter foils be kept by the Certifying Surgeon for a period of at least two years after the issue of the certificate.

3)If a certificate of fitness issued to a young person is lost, on receipt of application for the grant of a duplicate, the Certifying Surgeon shall issue the duplicate and send to the young person through the occupier of the factory where the young person is employed.

4) a) A fee of rupees 25/- shall be payable for the issue of every certificate of fitness issued under sub-rule (2) and shall be paid by the occupier.

b)A fee of rupees 10/- shall be payable for the issue of every duplicate of a certificate issued under sub-rule (3) and shall be paid by the worker unless the certificate is lost by the occupier where it shall be paid by the occupier.

5)The Certifying Surgeon shall, upon request by the Chief Inspector, carry out such examination and furnish him with such report as he may indicate for any factory or class or description of factories where -

a)cases of illness have occurred which it is reasonable to believe are due to the nature of the manufacturing process carried on or other conditions of work prevailing therein or

b)by reason of any change in the manufacturing process or in the substances used therein, or by reason of the adoption of any new manufacturing process or of any new substance for use in a manufacturing process, there is a likelihood of injury to the health of workers employed in that manufacturing process, or

c)Young person are, or are about to be, employed in any work which is likely to cause injury to their health.

6)For the purpose of the examination of persons employed in process covered by the Rules relating to dangerous operations, the Certifying Surgeon shall visit the factories within the local limits assigned to him at such intervals as are prescribed by the Rules relating to such dangerous operations.

7)At such visits the Certifying Surgeon shall examine the persons employed in such processes and shall record the result of his examination in a register known as Health Register in

Form 29 which shall be kept by the factory manager and produced to the Certifying Surgeon at each visit.

8)If the Certifying Surgeon finds as a result of his examination that any person employed in such processes is no longer fit for medical reasons to work in that process, he shall suspend such person from working in that process for such time as he may think fit and no person after suspension shall be employed in that process without the written sanction of the Certifying Surgeon in the Health Register.

9)The manager of a factory shall afford to the Certifying Surgeon facilities to inspect any process in which any person is employed or is likely to be employed.

10)The manager of a factory shall provide for the purpose of any medical examination which the Certifying Surgeon wishes to conduct at the factory (for his exclusive use on the occasion of an examination) a room, which shall be properly cleaned and adequately ventilated and lighted and furnished with a screen, a table (with writing materials) and chairs.

11)The occupier of the factory shall bear any expenditure towards any pathological, radiological tests etc. required by the Certifying Surgeon/ Medical Inspector to be performed in case of any worker working in the factory.

25A Miscellaneous:

1) Self-certification for Medium Risk factories instead of Departmental inspections may by submitted by the Occupier once in a year under the Act & Rules which may be clearly mentioned in the format / form;

2) Inspector should follow the inspection procedures and submit the inspection report online within 48 hours to Central Inspection System (CIS);

3) The inspections (except in case of complaint-based inspections) shall be limited to the prescribed checklist and the same inspector will not inspect the same establishment twice consecutively;

4) Joint inspection committee may be formed by the department with the members of other related Departments for conducting joint inspection for specific purpose like complaints, accidents etc.;

5) Institutionalize a Central Inspection System (CIS) responsible for undertaking compliance inspections of the Departments concerned.

The department may devise, in consistence with the Act & rules and notify the format/form of self-certification, procedures for submission of online application, tirne lines, list of documents for services, well defined inspection procedure and checklist, standard inspection report form, returns, reports, constitution of committee etc. required for the purpose of implementation of above sub-rule (1) to (5).

1Eighth Amendment vide No.F.2(345)-FB/EoDB(SRAP)/2020/1442-52 dated 19.10.2022

CHAPTER-III

26	**Cleanliness of walls and ceilings**
27	**Record of White Washing etc.**
28	**Compound to be kept clean.**
29	**Disposal of trade wastes and affluent**
30	**Ventilation and temperature**
31	**When artificial humidification not allowed**
32	**Provision of hygrometers**

33	Exemption from maintenance of hygrometers
34	Copy of schedule to rule 31 to be affixed near every hygrometer
35	Temperature to be recorded at each hygrometer
36	Specification of hygrometer
37	Thermometers to be maintained in efficient order
38	Inaccurate thermometer not to be used without fresh certificate
39	Hygrometer not to be affixed to wall, etc, unless protected by wood
40	No reading to be taken within 15 minutes of renewal of water
41	How to introduce steam for humidification
42	Lighting of Interior Parts
43	Prevention of glare
44	Power of Chief Inspector to exempt
45	Exemption from rule 42
46	Quantity of drinking water
47	Source of water supply
48	Means of supply
49	Cleanliness of wall or reservoir
50	Report of Health Officer or other officers appointed by the State Government for this purpose
51	Cooling of water
52	Latrine accommodation
53	Latrines to conform to public health requirements
54	Privacy of latrines
55	Sign Boards to be displayed
56	Urinal accommodation
57	Urinals to conform to public health requirements
58	Certain latrines and urinals to be connected to sewage system
59	Whitewashing, colour washing of latrines and urinals
60	Construction and maintenance of drains
61	Water taps in latrines
61A	Number of Sweepers
62	Provision of towel and soap in the latrines and urinals
63	Exemption
64	Number and location of spittoons
65	Type of spittoons
66	Cleaning of spittoons

Health

Rule 26. Cleanliness of walls and ceilings

[Exemptions under Sub-section (2) of section (11)**]**

1)Clause (d) of sub-section (1) of section (11) of the Act shall not apply to the class or description of factories or parts of factories specified in the schedule hereto;

Provided that they are kept in a clean state by washing, sweeping, brushing, dusting, vacuum cleaning or by other effective means;

Provided further that the said clause (d) shall continue to apply:-

a)in respect of factories or parts of factories specified in part A of the said schedule, to workrooms in which the amount of cubic space allowed for every person employed in the room is less than 14.2 cubic meters:-

b)in respect of factories or parts of factories specified in part B of the said schedule, to workrooms in which the amount of cubic space allowed for every person employed in the room is less than 70.8 Cubic meters.

c)to engine-houses, lunchrooms, canteens, shelters, creches, cloakrooms, rest rooms and wash places; and

d)to such parts of walls, sides and tops of passages and staircases as are less than 6 meters above the floor or stair;

2)If it appears to the Chief Inspector that any part of a part of a factory, to which by virtue of sub-rule (1) any of the provisions of the said clauses (d) do not apply, or apply as varied by sub-rule (1), is not being kept in a clean state, he may by written notice, require the occupier to whitewash or colour wash, wash, paint or varnish the same, and in the event of the occupier failing to comply with much requisition within two months from the date of the notice, sub-rule (1) shall cease to apply to such part of a factory, unless the Chief Inspector otherwise determines.

Schedule

Part-A

1.Blast furnaces.
2.Brick and tile works in which unglazed bricks or tiles are made.
3.Cement works.
4.Chemical works.
5.Copper mills.
6.Gas works.
7.Iron and Steel mills.
8.Stone, Slate and marble works.
9.The following parts of factories:-

a)Rooms used only for the storage of articles.

b)Rooms in which the walls or ceilings consist of galvanized iron, glazed bricks, glass, slate, asbestos, bamboo or thatch.

c)Parts in which dense steam is continuously evolved in the process.

d)Parts in which pitch, tar or like material is manufactured or is used to a substantial extent, except in brush works.

e)Parts of a glass factory known as glass house.

f)Rooms in which graphite is manufactured or is used to a substantial extent in any process.

g) Parts in which coal, coke, oxide of iron, ochre, lime or stone is crushed or ground.

h)Parts of wall, partitions, ceilings or tops of rooms which are at least 6 meters above the floor.

i)Ceilings or tops of rooms in print works, bleach works or dye works, with the exception of finishing rooms or warehouses.

j)Inside walls of oil mills below a height of 1.5 meters from the ground floor level.

k)Inside walls in tanneries below a height of 1.5 meters from the ground floor level where a wet process is carried on.

Part-B

1.Coach and motor body works.
2.Electric generating or transforming stations.
3.Engineering works.
4.Factories in which sugar is refined or manufactured.
5.Foundries other than foundries in which brass casting is carried on.
6.Gun factories.
7.Shipbuilding works.
8.Those parts of factories where unpainted or unvarnished wood is manufactured.

Rule 27. Deleted [1]

Rule 28. Compound to be kept clean.

The compound surrounding every factory shall be maintained in a sanitary and clean condition free of bushes, rubbish, filth or debris.

Rule 29. Disposal of trade wastes and affluent

[Rules under sub-section (2) of section (12)]

1.In the case of a factory where the drainage system is proposed to be connected to the public sewerage system, prior approval of the arrangements made shall be obtained from local authority.

2.In the case of a factory situated in a place where no public sewerage system exists, prior approval of the arrangements made for proposal of trade wastes and effluent shall be obtained from the Public Health Authorities or the Tripura State Pollution Control Board appointed under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981.

3.Rubbish, filth or debris shall not be allowed to accumulate or to remain in any part of the premises in a factory for more than 24 hours and shall be disposed in a manner approved by the Public Health Authorities and filth and other decomposing matter shall be kept in covered receptacles.

Tenth amendment vide No.7(121)-FB/AM(Vol.-II)/2007/2199-07 dated 27.01.2021

4.Wastes and effluent resulting from factory or industrial processes and which may be of injurious or obnoxious substances, shall not be disposed of without being suitably treated to render them unobjectionable to the satisfaction of the Public Health Authorities and of the Inspector. If any objection is raised by the arises between the Public Health Authorities and the Inspector with regard to treatment of wastes and other effluents under this rule, the matter shall be referred to the Chief Inspector whose decision shall be final.

5.All open drains carrying waste or sewage water or sewerage shall be constructed of masonry or other impermeable material and shall be regularly flushed at least twice daily and, where possible connected with some recognized drainage line.

Rule 30. Ventilation and temperature

(Rule prescribed under section 13)

1.Limits of temperature and air movement :- In any factory the maximum wet-bulb temperature of air in a workroom at a height of 1.5 meters above the floor level shall not exceed 300 centigrade and adequate air movement of at least 30 meters per minute shall be provided ; and in relation to dry-bulb temperature, the wet-bulb temperature in the workroom at the said height shall not exceed that shown in the schedule annexed hereto, or as regards a dry-bulb readings intermediate between the two dry-bulb readings that specified in relation to the higher of these two dry-bulb readings :

Schedule

Dry-bulb temperature (Degrees in Centigrade)	Wet-bulb temperature (Degrees in Centigrade)
30 to 34	29
35 to 39	28.5
40 to 44	28
45 to 47	27.5

Provided that if the temperature measured with a thermometer inserted in a hollow globe of 15 centimeters diameter coated mat black outside and kept in the environment for not less than 20 minutes exceeds the dry -bulb temperature of air, the temperature so recorded by the globe thermometer shall be taken in place of the dry-bulb temperature.

Provided further that when the reading of the wet-bulb temperature outside in the shade exceeds 270 C, the value of the wet-bulb temperature allowed in the schedule for a given dry-bulb temperature may be correspondingly exceeded to the same extent.

Provided further that this requirement shall not apply in respect of factories covered by Section 15 of the Act and in respect of factories where the nature of work carried on involves production of excessively high temperature referred to in clause (b) of sub-section (1) of Section 13 to which workers are exposed for short periods of time not exceeding one hour followed by an interval of sufficient duration in thermal environments not exceeding those otherwise laid down in this rule.

Provided further that the Chief Inspector having due regard to the health of the workers, may in special and exceptional circumstances, by an order in writing exempt any factory or part of a factory from the foregoing requirement, in so far as restricting the thermal conditions within the limits laid down in the schedule are concerned, to the extent that he may consider necessary subject to such conditions as he may specify.

2.Provisions of thermometers –

a)If it appears to the Inspector that in any factory, the temperature of air in a workroom is sufficiently high and is likely to exceed the limits prescribed in sub-rule (1), he may serve on the manager of the factory an order requiring him to provide sufficient number of whirling hygrometers or any other type of hygrometers and direct that the dry-bulb and wet-bulb readings in each such workroom shall be recorded at such positions as approved by the Inspector twice during each working shift by a person especially nominated for the purpose by the manager and approved by the Inspector.

b)If the Inspector has reason to believe that a substantial amount of heat is added inside the environment of a workroom by radiation from walls, roof or other solid surroundings, he may serve on the manager of the factory an order requiring him to provide one or more globe thermometers referred to in the first provision in sub-rules (1) and further requiring him to place the globe thermometers at places specified by him and keep a record of the temperatures in a suitable register.

3.Ventilation:-

a)In every factory the amount of ventilating openings in a workroom below the caves shall, except where mechanical means of ventilation as required by clause (b) below are provided, be of an aggregate area of not less that 15% of the floor area and so located as to afford a continued supply of fresh air:

Provided that the Chief Inspector may relax the requirements regarding the amount of ventilating openings if he is satisfied that having regard to the location of the factory, orientation of workroom, prevailing wings, roof height and the nature of manufacturing process carried on, sufficient supply of fresh air into the workroom is afforded during most part of the working time.

Provided further that this requirement shall not apply in respect of workrooms of factories –

(i)covered by Section 15, or

(ii)in which temperature and humidity are controlled by refrigeration.

b)Where in any factory owing to special circumstances such as situation with respect to adjacent buildings and height of the building with respect to floor space, the requirements of ventilation openings under clause (a) of this sub-rule cannot be complied with or in the opinion of the Inspector the temperature of air in a workroom is sufficiently high and it is likely to exceed the limits prescribed in sub-rule (1), he may serve on the manager of the factory an order requiring him to provide additional ventilation either by means of roof ventilators or by mechanical means.

c)The amount of fresh air supplied by mechanical means of ventilation in an hour shall be equivalent to at least 6(six) times the cubic capacity of the workroom and shall be distributed evenly throughout the workroom without dead air-pockets or undue draughts caused by high inlet velocities.

d)In the regions where in summer (15th March – 15th July) dry-bulb temperatures of outside air in the shade during most part of the day exceed 35 degrees centigrade and simultaneous wet-bulb temperatures are 25 degree centigrade or below and in the opinion of the Inspector the manufacturing process carried on in the workroom of a factory permits thermal environments with relative humidity of 50% or more, the Inspector may serve on the manager of the factory an order to have sufficient supply of outside air for ventilation cooled by passing it through water sprays either by means of unit type of evaporative air coolers (desert coolers) or, where supply of outside air is provided by mechanical means through ducts in a plenum system, by means of central air washing plants.

Rule 31. When artificial humidification not allowed

[Rules prescribed under sub-section (1) of Section 15)]

There shall be no artificial humidification in any room of a cotton spinning or weaving factory –

a)By the use of steam during any period when the dry-bulb temperature of that room exceeds 29.5 C; and

b)At any time when the wet-bulb reading of the hygrometer is higher than that specified in the following schedule in relation to the dry-bulb reading of the hygrometer at that times; or as regards a dry-bulb reading intermediate between any two dry-bulb readings indicated consecutively in the schedule when the dry-bulb reading does not exceed the wet-bulb reading to the extent indicated in relation to the lower of these two dry-bulb readings: -

Schedule

(Readings in degrees centigrade)

Dry-bulb	Wet-bulb	Dry-bulb	Wet Bulb	Dry-bulb	Wet-bulb
15.5	14.5	25.0	24.0	34.5	30.0
16.0	15.0	25.5	24.5	35.0	30.5
16.5	15.5	26.0	25.0	35.5	31.0
17.0	16.0	26.5	25.5	36.0	31.0
17.5	16.0	27.0	26.0	36.5	31.5
18.0	16.5	27.5	26.0	37.0	31.5
18.5	17.0	28.0	26.5	37.5	31.5
19.0	18.0	28.5	27.0	38.0	32.0
19.5	18.5	29.0	27.0	38.5	32.0
20.0	19.0	29.5	28.0	39.0	32.0
20.5	19.5	30.0	28.0	39.5	32.5
21.0	20.0	30.5	28.5	40.0	32.5
21.5	20.5	31.0	28.5	40.5	33.0
22.0	21.0	31.5	29.0	41.0	33.0
22.5	21.0	32.0	29.0	41.5	33.0
23.0	21.5	32.5	29.0	42.0	33.0
23.5	22.0	33.0	29.5	42.5	33.0
24.0	23.0	33.5	29.5	43.0	33.5
24.5	23.5	34.0	30.0	43.5	33.5

Provided, however, that clause (b) shall not apply when the difference between the wet-bulb temperature as indicated by the hygrometer in the department concerned and the wet-bulb temperature taken with a hygrometer outside in the shade is less than 2 degrees.

Rule 32. Provision of hygrometers –

In all departments of cotton spinning and weaving mills wherein artificial humidification is adopted, hygrometers shall be provided and maintained in such positions as are approved by the Inspector. The number of hygrometer shall be regulated according to the following scale:-

a)Weaving department – One hygrometer for departments with less than 100 looms, and one additional hygrometers for every 100 or part of 100 looms in excess of 100.

b)Other departments- One hygrometer for each room of less than 1700 cubic meters capacity and one extra hygrometer for each 1130 cubic meters or part thereof, in excess of this.

c)One addition hygrometer shall be provided and maintained outside each cotton spinning and weaving factory wherein artificial humidification is adopted, and in a position approved by the inspector, for taking hygrometer shade readings.

Rule 33. Exemption from maintenance of hygrometers

When the Inspector is satisfied that the limits of humidity allowed by the schedule to rule 31 are never exceeded, he may, for any department other than the weaving department, grant exemption from the maintenance of the hygrometer. The Inspector shall record such exemption in writing.

Rule 34. Copy of schedule to rule 31 to be affixed near every hygrometer –

A legible typed copy of the schedule to rule 31, duly authenticated with the Signature of either the occupier or the Manager, shall be affixed near each hygrometer.

Rule 35. Temperature to be recorded at each hygrometer –

At each hygrometer maintained in accordance with rule 32, correct wet & dry-bulb temperatures shall be checked thrice daily during each working day at a proportional period of interval by competent person nominated by the manager and approved by the Inspector.

Tenth amendment vide No.7(121)-FB/AM(Vol.-II)/2007/2199-07 dated 27.01.2021

Rule 36. Specification of hygrometer –

1)Each hygrometer shall comprise of two mercurial thermometers of wet-bulb and dry-bulb of similar constructions, and equal dimensions, scale and divisions of scale. They shall be mounted on a frame with a suitable reservoir containing water.

2)The wet-bulb shall be closely covered with a single layer of muslin, kept wet by means of a wick attached to it and dropping into the water in the reservoir. The muslin covering and the wick shall be suitable for the purpose, clean and free from size or grease.

3)No part of the wet-bulb shall be within 76 millimeter from the dry-bulb or less than 25 millimeter from the surface of the water in the reservoir and the water reservoir shall be below it, on the side of it away from the dry-bulb.

4)The bulb shall be spherical and or suitable dimensions and shall be freely exposed on all sides to the air of the room.

5)The bores of the stems shall be such that the position of the top of the mercury column shall be readily distinguishable at a distance of 60 centimeters.

6)Each thermometer shall be graduated so that accurate readings may be taken between 10 and 50 degrees centigrade.

7)Every degree from 10 degree upto 50 degrees shall be clearly marked by horizontal lines on the steam, each fifth degree; shall be marked by longer marks that the intermediates degrees and the temperature marked opposite each fifth degree, i.e. 10, 15, 20, 25, 30, 35, 40, 45, 50.

8)The markings as above shall be accurate, that is to say, at no temperature between 10 and 50 degrees, shall the indicated readings be in error by more that one ninth of a degree.

9)A distinctive number shall be indelibly marked upon the thermometer.

10)The accuracy of each thermometer shall be certified by the National Physical Laboratory, Delhi, or some competent authority appointed by the Chief Inspector of Factories and such certificate shall be attached to the humidity register.

Rule 37. Thermometers to be maintained in efficient order –

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Each thermometer shall be maintained at all times during the period of employment in efficient working order, so as to give accurate indications and in particular –

a)the wick and the muslin covering of the wet-bulb shall be renewed once a week;

b)the reservoir shall be filled with water which shall be completely renewed once a day. The Chief Inspector may direct the use of distilled water or pure rain water in any particular mill or mills in certain localities; and

c)no water shall be applied directly to the sick or covering during the period of employment.

Rule 38. Inaccurate thermometer not to be used without fresh certificate.

If an Inspector gives notice in writing that a thermometer is not accurate, it shall not, after one month from the date of such notice, be deemed to be accurate unless and until it has been reexamined as prescribed and a fresh certificate obtained which shall be kept attached to the humidity register.

Rule 39. Hygrometer not to be affixed to wall, etc, unless protected by wood.

1)No hygrometer shall be affixed to a wall, pillar, or other surface unless protected there from by wood or there non-conducting material at least 12 millimeter in thickness and distant at least 25 millimeter from the bulb of each thermometer.

2)No hygrometer shall be fixed at a height of more than 170 cm from the floor to the top of thermometer stem or in the direct draughts from a fan, window, or ventilating opening.

Rule 40. No reading shall be taken for record on any hygrometer within 15 minutes of the renewal or water

No reading shall be taken for record on any hygrometer within 15 minutes of the renewal or water in the reservoir.

Rule 41. How to introduce steam for humidification :-

In any room in which steam pipes are used for the introduction of steam for the purpose of artificial humidification of the air the following provisions shall apply:

a)the diameter of such pipes shall not exceed 50 mm and in the case of pipes installed after 1st day of Jan.1960 the diameter shall not exceed 25 millimeter;

b)such pipes shall be as short as is reasonably practicable.

c)all hangers supporting such pipes shall be separated from the bare pipes by an efficient insulator not less than 15 mm in thickness:

d)no uncovered jet from such pipe shall project more than 100 mm beyond the outer surface of any cover:

e)the steam pressure shall be as low as practicable and shall not exceed 5 kg per square centimeter: and

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f)the pipe employed for the introduction of steam into the air in a department shall be effectively covered with such non-conducting material, as may be approved by the Inspector in order to minimize the amount of heat radiated by them into the department.

Rule 42. Lighting of Interior Parts -

1)The general illumination over those interior parts of a factory where persons are regularly employed shall be not less than 65 lux measures in the horizontal plane at a level of 90 centimeters above the floor:

Provided that in any such parts in which the mounting height of the light source for general illumination necessarily exceeds 7.6 meters measured from the floor or where the structure or plant prevents the uniform attainment of this standard, the general illumination at the said level shall be not less than 22 lux and where work is actually being done the illumination shall be not less than 65 lux.

2)The illumination over all other interior parts of the factory over which persons employed pass shall, when and where a person is passing, be not less than 5 lux at floor level.

3)The standard specified in this rule shall be without prejudice to the provision of any additional illumination required to render the lighting sufficient and suitable for the nature of the work.

Rule 43. Prevention of glare

1.Where any source of artificial light in the factory is less than 5 meter above floor level, no part of the light source or of the lighting fitting having a brightness greater than 5 lamberts shall be visible to persons whilst normally employed within 30 meters of the source, except where the angle of elevation from the eye to the source or part of the fitting as the case may be exceeds 20 degrees.

2.Any local light, that is to say an artificial light designed to illuminate particularly the area or part of the area of work of a single operative or small group of operatives working near each other, shall be provided with a suitable shade of opaque material to prevent glare or with other effective means by which the light source is completely screened from the eyes of every person employed at a normal working place, or shall be so placed that no such person is exposed to glare there from.

Rule 44. Power of Chief Inspector to exempt-

Where the Chief Inspector is satisfied in respect of any particular factory or part thereof or in respect of any description of workroom or process that any requirement of rules 42 and 43 is inappropriate or is not reasonably practicable, he may by order in writing exempt the factory or part thereof, or description of workroom or process from such requirement to such extent and subject to such conditions as he may specify.

Rule 45. Exemption from Rule 42

Nothing in rule 42 shall apply to the parts of factories in which light sensitive photographic materials are made or used in an exposed condition or where such exposing portion are carried on.

Rule 46. Quantity of drinking water-

The quantity of drinking water to be provided for the workers in every factory shall be at least 5 liters a day for each worker employed in the factory and such drinking water shall be readily available at all times during working hours.

Rule 47. Source of water supply-

The water provided for drinking shall be supplied

a)from a public water-supply system, or

b)from any other source approved in writing by the Health Officer or any other Officer appointed by the State Government in this regard.

Rule 48. Means of supply

If drinking water is not supplied directly from tape either connected with public water supply system or any other water supply system of the factory approved by the Health Officer or any other officer appointed by the state Government, it shall be kept in suitable vessels, receptacles or tanks fitted with taps and having dust proof covers, and placed on raised stands or platforms in shade and having suitable arrangement of drainage to carry away the spilled water. Such vessels, receptacles or tanks shall be kept clean and the water renewed at least once every day. All practicable measures shall be taken to ensure that the water is free from contamination.

Rule 49. Cleanliness of well or reservoir

1.Drinking water shall not be supplied from any open well or reservoir unless it is so constructed, situated, protected and maintained as to be free from the possibility of pollution by chemical, or bacterial and extraneous impurities.

2.Where drinking water is supplied from such well or reservoir, the water in it shall be sterilized once a week or more frequently if the Inspector by written order so requires, and the date on which sterilizing is carried out shall be recorded;

Provided that this requirement shall not apply to any such well or reservoir if the water therein is filtered and treated to the satisfaction of the Health Officer or other officers appointed by the State Government as the case may be.

Rule 50. Report of Health Officer or other officers appointed by the State Government for this purpose

The Inspector may, by order in writing direct the manager to obtain, at such time or at such intervals as he may direct, a report from the Health Officer or other officers appointed by the State Government as to the fitness for human consumption of the water supplied to the workers, and in every case to submit to the Inspector a copy of such report as soon as it is received from the Health Officer or the other officers appointed by the state Government for this purpose.

Rule 51. Cooling of water

In every factory wherein more than two hundred and fifty workers are ordinarily employed:

a)the drinking water supplied to the workers shall from the Ist April to the 31st September in every year, be cooled by ice or other effective method:

Provided that if ice is placed in the drinking water, the ice shall be cleaned and wholesome and shall be obtained only from a source approved in writing by the Health Officer or other officer appointed by the State Government.

b)the cooled drinking water shall be supplied in every canteen, lunchroom and rest room and also at conveniently accessible points throughout the factory which for the purpose of these rules shall be called 'Water Centers':

c) the water centers shall be sheltered from the weather and adequately drained:

d)the number of water centers to be provided shall be one "center" for every 150 persons or part thereof employed at any one time in the factory :

Provided that in the case of a factory where the number of persons employed exceed 500, it shall be sufficient if there is one such "center" as aforesaid for every 150 person up to the first 500 and one for every 500 persons thereafter:

Provided further that the distance between the place of work of any worker shall not be more than 50 meters from the nearest water center or any distance as may be specified by the Inspector.

i)every water center shall be maintained in a clean an orderly condition :

ii)the means of supply of cooled drinking water shall be either directly through taps connected to water coolers or any other system for cooling of water, or by means of vessels, receptacles or tanks fitted with taps and having dust proof covers and placed on raised stands or platforms in shade, and having suitable arrangement of drainage to carry away the spilt water. Such vessels, receptacles or tanks shall be kept clean and the water renewed at least once every day : and

iii)every water center shall be in charge of a suitable person who shall distribute the water. Such person shall be provided with clean cloths while on duty.

Provided that the Chief Inspector may exempt any "water center" from the requirements of this clause.

Provided further that this clause shall not apply to any factory in which suitable mechanically operated drinking water refrigerating units are installed to the satisfaction of the Chief Inspector.

Rule 52. Latrine accommodation

Latrine accommodation shall be provided in every factory on the following scale :

a)where females are employed, there shall be at least one latrine for every 25 females :

b)where males are employed, there shall be at least one latrine for every 25 males.

Provided that where the number of males exceeds 100, it shall be sufficient if there is one latrine seat for every 25 males up to the first 100, and one for every 50 thereafter. In calculating the number of latrine required under this rule, any odd number of workers less than 25, or 50, as the case may be, shall be reckoned as 25 or 50.

(c) Sanitary Napkins of adequate quantity, conforming to Indian Standards shall be provided and maintained in the female toilets for their use, and the same replenished on daily basis;[1]

(d) disposable bins with lids shall be provided within the women's toilets for the collection of the used napkins. The used napkins shall be disposed off as per the procedure approved by the Chief Inspector, by order.[1]

Rule 53. Latrines to conform to public health requirements-

Latrines, other than those connected with an efficient water-borne sewage

System, shall comply with the requirements of the public Health authorities.

Rule 54. Privacy of latrines-

Every latrine shall be under cover and every seat in the latrine shall be so

Partitioned off as to secure privacy, and each partitioned shall have a proper door and fastenings.

Rule 55. Sign Boards to be displayed-

Where workers of both sexes are employed, there shall be displayed outside each latrine block a notice "For Men Only" or "For Women Only" as the case may be, in the language understood by the majority of the workers. The notice shall also bear the figure of a man or of a woman as the case may be.

Rule 56. Urinal accommodation-

1. Urinal accommodation shall be provided for the use of workers and shall not be less than 60 centimeters in length for every 50 workers. Provided that, where the number of workers employed exceeds 500, it shall be sufficient if there is one urinal for every 50 workers up to the first 500 employed and one for every 100 thereafter. Where women are employed, separate urinal accommodation shall be provided for them on the same scale as mentioned above :

   Provided further that the Chief Inspector may by order in writing exempt, subject to such conditions as he may think fit to impose, small factories employing less than 20 workers from the provisions of separate urinal accommodation if he is satisfied that the latrine accommodation in such factories is sufficient and suitable.

2. In calculating the urinal accommodation required under sub-rule (1), any odd number of workers less than 50 or 100, as the case may be, shall be reckoned as 50 or 100, and the maximum number of persons working in the factory, at any time and not the total number of persons employed in the factory, shall be taken into account.

Rule 57. Urinals to conform to public health requirements-

Urinals, other than those connected with an efficient water-borne sewage system, and urinals in a factory wherein more than two hundred and fifty workers are ordinarily employed shall comply with the requirements of the Public Health authorities.

[1]Sixth Amendment vide No.F.7(121)-FB/AM(Vol.-II)/2007/595 dtd., 12.06.2019.

Rule 58. Certain latrines and urinals to be connected to sewage system-

When any general system of underground sewerage with an assured water supply for any particular locality is provided in a municipality, all latrines and urinals other than septic tank latrine and any other type of latrines and urinals to be approved for this purpose by the public

Health authority, of a factory situated in such locality shall, if the factory is situated with 30 meters of an existing sewer, be connected with that sewage system.

1 31

Rule 59. Deleted.

Rule 60. Construction and maintenance of drains-

All drains carrying waste or sullage water shall be constructed in masonry or other impermeable material and shall be regularly flushed and the effluent disposed of by connecting such drains with a suitable drainage line.

Provided that where there is no such drainage line, the effluent shall be deodorized and rendered innocuous and then disposed of in a suitable manner to the satisfaction of the Health Officer.

Rule 61. Water taps in latrines-

1)Where piped water supply is available, a sufficient number of water taps, conveniently accessible, shall be provided in or near such latrine accommodation.

2)If piped water supply is not available, sufficient quantity of water shall be kept stored in suitable receptacles near the latrines.

Rule 61. (A) Number of Sweepers-

In every factory employing number of workers in any shifts as shown in column # 2 of the

schedule appended hereto, there shall be employed at least a number of full time/part time sweepers as shown in column # 3 of the said schedule in the respective shift to clean the latrines, urinals and wash places provided in the factory for the use of the workers employed in that shift, in order to maintain the same in clean and sanitary condition at all times.

Schedule

Serial No	of workers in the shift the shift	No of sweepers to be employed in
1.	Up to 100	1 part time
2.	Above 100 but not above 250	1 full time
3.	Above 250 but not above 500	2 full time
4.	Above 500 but not above 1000	3 full time

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[1]Eleventh Amendment vide No.F.7(121)-FB/AM(Vol.-II)/2007/1058-68 dtd., 13.09.2022.

5.	Above 1000	3 full time plus one full time for every additional 500 or part thereof.

Rule 62. Provision of towel and soap in the latrines and urinals-

Sufficient number of towels and soaps shall be provided as to the satisfaction of the Inspector.

Rule 63. Exemption

The Chief Inspector may exempt the factories declared under section 85 form the provisions of Rules 52 to 62 provided he is satisfied that there are alternative arrangements for meeting the requirements of latrines and urinals.

Provided further that the Chief Inspector may exempt any other class of factories employing less than 20 workers which are already in existence on the date of application of these rules from the provisions of the rules 52 to 62 on being satisfied about other suitable arrangements.

Rule 64. Number and location of spittoons-

The number and location of the spittoons to be provided shall be to the satisfaction of the Inspector.

Rule 65. Type of spittoons-

The spittoons shall be of any of the following types :

a)a galvanized iron container with a conical funnel-shaped cover. A layer of suitable disinfectant liquid shall always be maintained in the containers.

b)a container filled with dry, clean sand, and covered with a layer of bleaching powder ; or

c)any other type approved by the Chief Inspector.

Rule 66. Cleaning of spittoons

The spittoon mentioned in clause (a) of rule 65 shall be emptied, cleaned and disinfected at least once every day ; and the spittoon mentioned in clause (b) of rule 65 shall be cleaned by scrapping out the top layer of sand as often as necessary or at least once every day.

Chapter IV

Rule 67	**Further Safety precautions**

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Schedule II	Jute Mill

Schedule III	Cotton Ginning Machinery

Schedule IV	Wood Working Machinery

Schedule V	Rubber Mills and Plastic Mills

Schedule VI	Centrifugal Machines

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Schedule VIII	Shears, Slitters and Guillotine Machines

Schedule IX	Agitators and Mixing Machines

Schedule X	Leather, Plastic and Rubber Stripper Machines

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Schedule XII	**All factories**
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Rule 100	Health and Safety Policy
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Rule 102	Disclosure Of Information Of Workers
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Rule 104	Information On Industrial Wastes
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Rule 106	Confidentiality Of Information
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Rule 114	Quality of personal protective equipment
Rule 115	Protective equipment
Rule 116	Thermic Fluid Heaters

Rule 67. Further Safety precautions.

Without prejudice to the provisions of sub-section (i) of section 21 in regard to the fencing of machines, further precautions specified in the schedules annexed hereto shall apply to the machines noted in each schedule.

Schedule 1

Textile Machinery except Machinery used in Jute Mills.

1.Application – The requirement of this schedule shall apply to machinery in factories engaged in the manufacture or processing of textiles other than jute textiles.

2.Definitions – For the purposes of this schedule-

a)"Calendar" means a set of heavy rollers mounted on vertical side frames and arranged to pass cloth between them. Calendars may have two to ten rollers, or howls, some of which can be heated.

b)"Embossing calendar" means a calendar with two or more rolls, one of which is engraved for producing figure effects of various kinds on a fabric.

c)"Card" means a machine consisting of cylinders of various sizes – and in certain cases flats – covered with card clothing and set in relation to each so that fibers in staple form may be separated into individual relationship.

The speed of the cylinders and their direction of rotation varies. The finished product is delivered as a silver. Cards of different types are : the revolving flat card, the roller and clearer card, etc.

d)"Card Clothing" means the material with which the surfaces of the cylinder, doffer, flats, etc. of a card are covered and consists of a thick foundation material made of, either textile fabrics through which are pressed many fine closely spaced, specially bent wires, or mounted saw toothed wire.

e)"Comber" means a machine for combining fibers of cotton, wool, etc. The essential parts are device for feeding forward a fringe of fibers at regular intervals and an arrangement of combs or pins, which, at the right time, pass through the fringe. All tangled fibres, ahort fibres, and nips are removed and the long fibres are laid parallel.

f)"combing machinery" means a general classification of machinery including combers, sliver lap machines, ribbon lap machines, and gill boxes, but excluding cards.

g)"Rotary staple Cutter" means a machine consisting of one or more rotary blades used for the purpose of cutting textile fibres into staple lengths.

h)"Garnett machine" means any of a number of types of machines for opening hard twisted waste of wool, cotton, silk, etc. Essentially, such machines consist of a licker-in ; one or more cylinders, each having a competent worker and stripper rolls; and a fency roll and doffer. The action of such machines is somewhat like that a wool card, but it is much more severe in that the various rolls are covered with garnett wire instead of card clothing.

i)"Gill Box" means a machine used in the worsted system of system of manufacturing yarns. Its function is to arrange fibres in parallel order. Essentially, it consists of a pair of freed rolls and a series of followers where the followers move at a faster surface speed and perform a combing action.

j)"In-funning rolls" means any pair of rolls or drums between which there is a "nip".

k)"Interlocking arrangement" means a device that prevents the setting in motion of a dangerous part of a machine or the machine itself while the guard cover or door provided to safeguard against danger is open or unlocked, and which will also hold the guard, cover or door closed and locked while the machine or the dangerous part is in motion.

l)"kier" means a large metal vat, usually a pressure type, in which fabrics may be boiled out, bleached, etc.

m)"Ribbon lapper" means a machine or a part of a machine used to prepare laps for feeding a cotton comb ; its purpose is to provide a uniform lap in which the fibres have straightened as much as possible.

n)"Silver lapper" means a machine or a part of a machine in which a number of parallel card slivers are drafted slightly, laid side by side in a compact sheet, and wound into a cylindrical package.

o)"Loom" means a machine for effecting the interlocking of two series of yarns crossing one another at right angles. The warp yarns are wound on a warp beam and pass through headless and reeds. The filling is shot across in a shuttle and settled in place by reeds and slay and the fabric is wound on a cloth beam.

p)"Starch mangle" means a mangle that is used specifically for starching cotton goods. It commonly consists of two large rolls and a shallow open vat with several immersion rolls. The vat contains the starch solution.

q)"Water mangle" means a calendar having two or more rolls used for squeezing water from fabrics before drying. Water mangles also may be used in other ways during the finishing of various fabrics.

r)"Mule" means a type of spinning frame having a head stock and a carriage as its two main sections. The head stock is stationary. The carriage is movable and it carries the spindles which draft and spin the roving into yarn. The carriage extends over the whole width of the machine and moves slowly toward and away from the head stock during the spinning operation.

s)"Nip" is the danger zone between two rolls or drums which by virtue of their positioning and movement create a nipping hazard.

t)"Openers and Pickers" means a general classification of machinery which includes breaker pickers, intermediate pickers, finisher pickers, single process pickers, multiple process pickers, willow machines, card and picker waste cleaners, thread extractors, shredding machines, roving waste openers, shoddy pickers, bale breakers, feeders, vertical openers, lattice cleaners, horizontal cleaners, and any similar machinery equipped with either cylinders, screen section, calendar section, rolls, or beaters used for the preparation of stock for further processing.

u)"Paddler" means a through for a solution and two or more squeeze rolls between which cloth passes after being passed through a mordant or dye bath.

v)"Plaiting machine" means a machine used to lay cloth into folds of regular length for convenience of subsequent process or use.

w)"Roller printing machine" means a machine consisting of large central cylinder, or pressure bowl, around the lower part of the perimeter of which is placed a series of engraved color rollers (each having a color through), a furnisher roller, doctor blades, etc. The machine is used for printing fabrics.

x)"Continuous bleaching range" means a machine for bleaching of cloth in rope or open-width form with the following arrangement. The cloth, after wetting out, pass through a squeeze roll into a saturator containing a solution of caustic soda and then to and enclosed J-Box. A V-shaped arrangement is attached to the front part of the J. Box for uniform and rapid saturation of the cloth with steam before it is packed down in the J-Box. The cloth, in a single strand rope form, passes over a guide roll down the first arm of the "V" and up the second. Steam is injected into the "V" at the upper end of the second arm so that the cloth is rapidly saturated with steam, at this point. The J-Box capacity is such

that cloth will remain hot for a sufficient time to complete the scouring action. It then passes series of washers with a squeeze roll in between. The cloth then passes through a second set of saturator, J-Box and washer, where it is treated with the peroxide solution. By slight modification of the form of the unit, the same process can be applied to open-width cloth.

y)"Mercerizing range" means a 3-bowl mangle, a tenter frame, and a number of boxes for washing a scouring. The whole set up is in a straight line and all parts operate continuously. The combination is used to saturate the cloth with sodium hydroxide, stretch it while saturated, and washing out most of the caustic before releasing tension.

z)"Sanforizing machine" means a machine consisting of a large steam-heated cylinder, and endless, thick, wollen felt blanket which is in close contact with the cylinder for most of its perimeter, and an electrically heated shoe which presses the cloth against the blanket while the latter is in a stretched condition as it curves around feed-in roll.

aa)"Shearing machine" means a machine used for shearing cloth. Cutting action is provided by a number of steel blades spirally mounted on a roller.
The roller rotates in close contact with a fixed ledger blade. There may be form one to six such rollers on a machine.

bb)"Singeing machine" means a machine which comprises of a heated roller, plate, or an open gas flame. The cloth or yarn is rapidly passed over the roller or the plate or through the open gas flame to remove fuzz or hairiness by burning.

cc)"Slasher" means a machine used for applying a size mixture to wrap yarns. Essentially, it consists of a stand for holding section beams, a size box, one or more cylindrical dryers or an enclosed hot air dryer, and a beaming end for winding the yarn on the loom beams.

dd)"Tenter frame" means a machine for drying cloth under tension. It essentially consists of a pair of endless traveling chains fitted with clips of fine pins and carried on tracks. The cloth is firmly held at the salvages by the two chains which diverge as they move forward so that the cloth is brought to the desired width.

ee)"Warper" means a machine for preparing and arranging the yarns intended for the warp of a fabric, specifically, a beam warper.

3.General safety requirements.

1)Every textile machine shall be provided with individual mechanical or electrical means for starting and stopping such machines. Belt shifter on machines driven by belts and shafting should be provided with a belt shifter lock of an equivalent positive locking device.

2)Stopping and starting handles or other controls shall be of such design and so positioned as to prevent the operator's hand or fingers from striking against any moving part of any other part of the machine.

3)All belts, pulleys, gears, chains, sprocket wheels, and other dangerous moving parts of machinery which either form part of the machinery or are used in association with it, shall be securely guarded.

4.Openers and pickers.

1)In all opening or picker machinery, beaters and other dangerous parts shall be securely fenced to suitable guards so as to prevent contact with them.

Such guards and doors or covers or openings giving access to any dangerous part of the machinery shall be provided with interlocking arrangement.

Provided that in the case of doors or covers of openings givings access to any dangerous part, other than beater covers, instead of the interlocking arrangement, such openings may be so fenced by guards which prevent access to any such dangerous part and which is either kept positively locked in position or fixed in such a manner that it cannot be removed without the use of hand tools.

2)The feed rolls on all opening and picking machinery shall be covered with a guard designed to prevent the operator from reaching the nip while the machinery is in operation.

3)The lap

forming rollers shall be fitted with a guard or cover which shall prevent access to the nip at the intake of the lap roller and fluted roller as long as the weighted rack is down. The Guard or cover shall be so locked that it cannot be raised until the machine is stopped, and the machine cannot be started until the cover or guard is closed.

Provided that the foregoing provision shall not apply to the machines equipped with automatic lap

forming devices.

Provided further any such machine equipped with an automatic lap forming device shall not be used unless the automatic lap forming device is in efficient working order.

5.Cotton cards.

1)All cylinder doors shall be secured by interlocking arrangement which shall prevent the door being opened until the cylinder has ceased to revolve and shall render it impossible to restart the machine until the door has been closed.

Provided that the latter requirement in respect of the automatic locking device shall not apply while stripping or grinding operations are carried out;
Provided further that stripping or grinding operations shall be carried out only by specially trained adult workers wearing tight fitting clothing whose names have been recorded in the register in

Form 12 prescribed in this behalf as required in subsection (1) of section 22.

2)The licker-in shall be guarded so as to prevent access to the dangerous parts.

3)Every card shall be equipped with an arrangement that would enable the card cylinder to be driven by power during stripping/grinding operations without having to either shift the main belt to the fast pulley of the machine or to dismantle the interlocking mechanism. Such an arrangement shall be used only for stripping or grinding operations.

6.Garnett machines.

1)Garnett licker-ins shall be enclosed.

2)Garnett fancy rolls shall be enclosed by guards. Those shall be installed in a way that keeps worker rolls reasonably accessible for removal or adjustment.

3)The underside of the garnett shall be guarded by a screen mesh or other form of enclosures to prevent access.

7.Gill boxes.

1)The feed end shall be guarded so as to prevent fingers being caught in the pins of the intersecting fallers.

2)All nips of in-running rolls shall be guarded by suitable nip guards conforming to the following specifications:-

Any opening which the guard may permit when fitted in position shall be so restricted with respect to the distance of the opening from any nip point through that opening and in any circumstances the maximum width of the opening shall not exceed the following:

Distance of opening from nip point	Maximum width of opening
0 to 30 mm	6 mm
39 to 63 mm	10 mm
64 to 88 mm	13 mm
89 to 140 mm	15 mm
141 to 165 mm	19 mm
166 to 190 mm	22 mm
191 to 215 mm	32 mm

8. Silver and ribbon lappers (cotton).

The calendar drums and the lap spool shall be provided with a guard to prevent access to the nip between the in-running rolls.

9.Speed frames.

Jack box wheels at the head stock shall be guarded and the guard shall Have interlocking arrangement.

10.Spinning mules.

Wheels on spinning mule carriages shall be provided with substantial wheel guards, extending to within 6 mm of the rails.

11.Warpers. Swiveled double-bar gates shall be installed on all warpers operating in excess of 410 meters/min. These gates shall have interlocking arrangement, except for the purpose of inching or jogging.

Provided that the top and bottom bars of the gate shall be at least 1.05 and 0.53 meters high from the floor or working platform, and the gate shall be located 38 mm from the vertical tangement to the beam head.

12.Slashers.

1)Cylinder dryers.

a)All open nips of in-running rolls shall be guarded by nip guards conforming to the requirements in paragraph 7.

b)When slashers are operated by control levers, therse levers, shall be connected to a horizontal bar or treadle located not more than 170 cm. above the floor to control the operation from any point.

c)Slashers operated by push-button control shall have stop and start buttons located at each end of the machine and additional stop and start buttons located on both sides of the machines at intervals spaced not more than 1.83 meters on centers.

13.Looms. 1) Each loom shall be equipped with suitable guards designed to minimize the danger from flying shuttles.

2)Beam weights for tension in beam shall be of such construction so as to prevent it falling during its adjustment.

14.Valves of kiers, tanks, and other containers.

1)Each valve controlling the flow of steam, injurious gases or liquids into a kier or any other tank or container into which a person in likely to enter in connection with a precess, operation, maintenance or for any other purpose, shall be provided with a suitable locking arrangement to enable the said person to lock the valve securely in the closed position and retain the key with him before entering the kier, tank or container.

2)Wherever boiling tanks, caustic tanks and any other containers from which liquids which are hot, corrosive or toxic may overflow of splash, are so located that the operator cannot see the contents from the floor or working area emergency shut off valves which can be controlled from a point not subject to danger of splash shall be provided to prevent danger.

15.Shearing machines: All revolving blades on shearing machines shall be guarded so that the opening between the cloth surface and the bottom of the guard will not exceed 10 mm.

16.Continuous bleaching range (cotton and rayon). The nip of all in-running rolls on open-width bleaching machine rolls shall be protected with a guard to prevent the worker from being caught at the nip. The guard shall extend across the entire length of the nip.

17.Mercerizing range (piece goods).

1)A stopping device shall be provided at each end of the machine.

2)A guard shall be provided at each end of the frame between the in-running chain and the clip opener.

3)A nip guard shall be provided for the in-running rolls of the mangle and washers and the guard shall conform to the requirements in paragraph 7 (2).

18.Tender frames.

1)A stopping device shall be provided at each end of the machine.

2)A guard shall be provided at each end of the machine frame at the in- running chain and clip opener.

19.Paddlers. Suitable nip guards conforming to the requirement in paragraph 7(2) shall be provided to all dangerous in-running rolls.

20.Centrifugal extractors.

1)Each extractor shall be provided with a guard for the basket, and the guard shall have inter-locking arrangement.

2)Each extractor shall be equipped with a mechanically or electrically operated brake to quickly stop the basket when the power driving the basket is shut off.

21. Squeezer or wringer extractor, water mangle, strach mangle, back washer (worsted yarn), crabbing machines and decating machine-All in-running rolls shall be guarded with nip guards conforming to the requirements in paragraph 7(2).

22.Sanforizing and palmer machine.

1)Nip guards shall be provided on all accessible in-running rolls and these shall conform to the requirements in paragraph 7(2).

2)Access from the sides to the nips of in-running rolls should be fenced by suitable side guards.

3)A safety trip rod, cable or wire center cord shall be provided across the front and back of all palmer cylinders extending the length of the face of the cylinder. It shall operate readily whether pushed or pulled. The safety trip shall not be more than 170 cm above the level at which the operator stands and shall be readily accessible.

23.Rope washers.

1)Splash guards shall be installed on all rope washers unless the machine is so designed as to prevent the water or liquid from splashing the operator, the floor, or working surface.

2)A safety trip rod, cable or wire centre cord shall be provided across the front and back of all rope washers extending the length of the face of the washer. It shall operate readily whether pushed or pulled. This safety trip shall be not more than 170 cm. above the level on which the operator stands and shall be readily accessible.

24.Laundry washer tumbler or shaker.

1)Each drying tumbler, each double cylinder shaker or clothes tumbler and each washing machine shall be equipped with an inter-locking arrangement which will prevent the power operation of the inside cylinder when the outer door on the case or shell is open, and which will also prevent the outer door on the case or shell from being opened without shutting off the power and the cylinder coming to a stop. This should not prevent the movement of the inner cylinder by means of a hand operated mechanism or an inching device.

2)Each closed barrel shall also be equipped with adequate means for holding open doors or covers of the inner and outer cylinders of shells while it is being loaded or unloaded.

25.Printing machine (roller type).

1)All in-running rolls shall be guarded by nip guards conforming to the requirement in paragraph 7(2).

2)The engraved roller gears and the large crown wheel shall be guarded.

26.Calenders. The nip at the in-running side of the rolls shall be provided with a guard extending across the entire length of the nip and arranged to prevent the fingers of the workers from being pulled in between the rolls or between the guard and the rolls, and so constructed that the cloth can be fed into the rolls safely.

27.Rotary staple cutters. The cutter shall be protected by a guard to prevent hands reaching the cutting zone.

28.Plaiting machines. Access to the trap between the knife and card bar shall be prevented by a guard.

29.Hand baling machine. An angle iron handle-stop guard shall be installed at right angle to the frame of the machine. The stop guard shall be so designed and so located that it

will prevent the handle from traveling beyond the vertical position should the handle slip from the operator's hand when the pawl has been released from the teeth of the take-up gear.

30. Flat-work ironer. Each flat-work or collar ironer shall be equipped with a safety bar or other guard across the entire front of the feed or first pressure rolls so arranged that the striking of the bar or guard by the hand of the operator or other person will stop the machine. The guard shall be such that the operator or other person cannot reach into the rolls without removing the guard. This may be either a vertical guard on all sides or a complete cover. If a vertical guard is used, the distance from the floor or working platform to the top of guard shall be not less than 1.83 meters.

Schedule – II

JUTE MILL

1.Fencing of Machinery.

Fencings, guards or safety devices in respect of each individual machine as prescribed shall be provided and maintained in good order.

2.Softening Machine.

a)A safety stopping device comprising or a breast plate in front of the feed table shall be provided to operate the belt striking gear by releasing an unbalanced weight.

No device departing from the unbalanced weight principle will be deemed to conform to this rule unless it has been approved in writing by the inspector. In the case of machines provided with an individual electric drive the device shall be arranged to act on a switch inserted in the no-volt release circuit.

b)The feed table shall not be less than 1.83 meters in length, measured from the centre of the first cloth roller to the centre of the first pair of cast iron rollers. The table shall be provided with side guards reaching a height of not less than 1.37 meters from the floor, and extending at that height, not less than 1.07 meters from the centre of the first pair of rollers; the height of the rest of the side guards shall not be less than 1.22 meters from the floor.

c)The starting and stopping gear shall be arranged to comply with the following :-

i)Provision for stopping the machine at both the feed and delivery ends.

ii)Provision for starting the machine at the feed end only, the design shall be such that an operator at the feed and cannot start the machine without the co-operation of an operator at the delivery end.

iii)When a machine is stopped for clearing a jam or attention otherwise, the starting gear shall be secured in the “Off” position at least by a lock operated by a removable key in possession of the person attending the machine.

iv)The lever operating the unbalanced weight shall be securely fenced. d)Sheet steel casings completely enclosing the side shafts, i.e. , the shafts and gears shall not be exposed on the underside. The casings shall be locked or secured by a device which will ensure i) that they cannot be opened while the machine is in motion and ii) that it will not be possible to start the machine unless they are closed.

3.Carding machines:

a)The underframe shall be guarded in such a manner that it will not be possible for operators to obtain access underneath the machine until the cylinder has ceased to revolve. The lowest cross member of the frame shall come down to point not more than 25.4 cm from the floor and all openings above this, large enough to permit of access underneath, shall be filled in with sheet steel or fitted with bars or rods spaced not more than 15.24 cm apart, any part of this controlled by a device which will ensure they can not be opened until the cylinder has come to rest and that the machine cannot be restarted until the doors are closed : Provided that in the case of machines installed before 1st January 1950, rigidly secured panels filling the under-frame will be deemed to comply with it.

b)A guard with panels and sliding doors of sheet steel or closely spaced bars or rods enclosing the side gears; there shall be no opening at the underside of this protection for access to the gears. The sliding doors shall be controlled by a device which will ensure that they cannot be opened until the cylinder has come to rest, and that the machine cannot be started up until the doors are closed.

c)A sheet steel guard extending upto the centre line of the cylinder, enclosing the stripper belts and pulleys shall be provided on all machines installed after 1st January, 1950.

d)An adequately strong and rigid set of bars or rods over the doffer roller, shall be securely bolted in position. This guard must follow the radius of the roller; the space between the rods not to exceed 5.08 cm; the distance from the doffer pin points to the underside of the rods to be 10.16 cm; the space between the drawing pressing roller and the first rod not to exceed 5.08 cm; and the width of the guard from the first to the last rod to be not less than 30.5 cm.

e)A hard or guard rail extending the full width of the Drawing pressing roller, fitted in a convenient position in front of and higher than the roller.

f)Effective side guards to prevent operator's fingers being caught between the delivery roller and the pressing ball.

g)When a machine is stopped for clearing a jam or attention otherwise, the starting gear shall be secured in the "Off" position atleast by a lock operated by a removable key in possession of the person attending the machine.

4.Drawing machine.

a) A sheet steel guard completely closing the space between the bend rail and the bottom of the retaining roller, the opening and closing of which shall be controlled by the starting gear, and the design such that the guard cannot be opened while the machine is running. The guard plate shall swivel more or less about the centre of its height, and the top edge shall swing inwards towards the gill bars as guard opens, and outwards as the guard closes :

Provided further that in the case of machines with individual electric drive it will be sufficient if the guard is of the swiveling type and interlinked with the driving mechanism so that silver cannot be fed into the gills, or the guard opened, before the machine is stopped , and that the machine cannot be started up unless the guard is closed.

b)Sheet steel or cast iron guards completely enclosing the end gears, the design to be such that access to the gears is possible only by removing the guard in its entirety. If doors or movable panels are provided they shall be controlled by a locking device, operated by the starting gear, which will ensure that the machine cannot be started unless the guard is completely closed and that no movable part cannot be opened whilst the machine is in motion;

Provided that in the case of machines installed before Ist Jan., 1950, a guard securely held in position by automatic catches to prevent opening by vibration but without the interlocking arrangement will be deemed to comply with it.

c)An efficient guard shall be provided which will prevent operator fingers or hands being caught between the delivery roller and the pressing ball.

d)Starting and stopping gear so designed that the machine can be stopped by operatives on the feed and delivery sides; can be started only by an operative on the feed side but with the cooperation of the operative on the delivery side and cannot be started by an operative on the delivery side.

The device necessitating cooperation shall be engaged before the machine stops.

e)Shear pins driving the individual carriages shall be fitted to the pinion on the main back shaft and not to the pinion on the carriage back shaft.

5.Roving machine.

a)Starting and stopping gear shall be designed to embody the following :

i)Provision for stopping the machine on both the feed and delivery side.

ii)Provision for starting the machine on the delivery side only.

iii)A device on the delivery side which will automatically lock the belt striking gear in the "Off" position. This device shall be such that the machine will not stop before the lock is engaged nor start before it is disengaged by a worker on the delivery side.

b)Sheet steel or cast iron guards completely enclosing the end gears, the design to be such that access to the gears is possible only by removing the guard in its entirety. If doors or movable panels are provided, they shall be controlled by a locking device, operated by the starting gear, which will ensure that the machine cannot be started unless the guard is completely closed land that no movable part can be opened whilst the machine is in motion :

Provided that in the case of machines installed before Ist Jan., 1950, a guard securely held in position by automatic catches to prevent opening by vibration, but without the interlocking arrangement will be deemed to comply with it.

c)Shear pins driving individual carriages shall be fitted to the pinion on the main back shaft and not to the pinion on the carriage back shaft.

6.Spinning frames.

a)Access between the driving cylinders whilst in motion shall be prevented by providing a door at the pass end, so interconnected with the starting gear that neither side of the frame can be set in motion whilst the door is open and conversely the door cannot be opened whilst either or both sides of the frame is or are running.

Provided that in the case of machines installed before Ist Jan.,1950, hinged and will secured doors will be deemed to comply with it.

b)Sheet steel or cast iron guards completely enclosing the end gear, the design to be such that access to the gears is possible only by removing the guard in its entirely; If doors or movable panels are provided they shall be controlled by a locking device, operated by the starting gear, which will ensure that the machine cannot be started unless the guard is completely closed and that no movable part can be open whilst the machine is in motion :

Provided that in the case of machine installed before 1st Jan., 1950, a guard securely held in position by automatic catches to prevent opening by vibration but without the interlocking arrangement will be deemed to comply with it.

7.Cop Winding machines :

a)Effective guards covering the driving end gears. Hinged doors or panels will not be deemed to comply with this rule unless securely held in the closed position by automatic catches to prevent opening by vibration.

b)Guards covering the spindle driving gears of such designs that it will not be possible to remove them from position whilst the machine is in motion :Provided that in

the case of machines installed before Ist Jan., 1950, guards rigidly secured by bolts or screws will be deemed to comply with it.

8.Roll winding machines :

Effective guards for traverse or other gears and cams. Hinged doors or panels will not be deemed to comply with this rule unless securely held in the closed position by automatic catches to prevent opening by vibration.

9.Beaming machines :

a)The flywheel shall be of the disc type.

b)Cross and side shafts driving the starch rollers shall be enclosed in protecting tubes.

c)A guard securely anchored in position and protecting the nip between the top and bottom starch rollers. It shall have an aperture large enough to pass the yarn through but not the operator's hand. A hinged guard will not be deemed to be compliance with this rule.

d)A guard protecting the nip between the yarn beam pressing roller and the outer top weight roller, i.e. the top weight roller on the side at which the beam is inserted and removed.

e)The space between an yarn guide roller and its adjacent steam cylinder must be not less than 7.62 cm.

10.Looms :

a)Sheet steel or cast iron for guards protecting the crank and wiper shaft spur gears shall be provided.

b)The minimum clearance between the sley and breast beam shall be not less than 5.08 cm.

c)Yarn beams shall be placed on looms by mechanical or other means. Lifting into position by hand alone will not be deemed to comply with this rule.

11.Cropping machines :

Sheet steel guards protecting the spirals shall be provided.

12.Calendaring machines :

a)A strong and rigid guard securely fixed in position, in front of the nip between the bottom cast iron roller and the paper roller on top of same.

This guard shall be constructed in such a manner that it will be impossible for the fingers of an operator to reach the nip through the aperture in the guard.

b)Safety rollers protecting the nip of the upper rollers :

These rollers must be made of steel or wrought iron tube, as light as possible and not more than 6.35 cm in external diameter. The safety roller shall ride on the under roller and be free to lift. It shall be set in such a manner that the peripheral clearance between it and the upper roller, and between it and the under roller when the safety roller is fully raised, will not permit of an operator's fingers reaching the nip.

c)Sheet steel panels shall be fitted on the machine gable to prevent access through same to the large wheel.

d) Lever weights shall be lowered into strong and rigid guards.

13.Cloth cutting machines:

A guard preventing access to the knife from the front, top or sides shall be provided. On the underside the knife shall be protected up to the maximum limit without interfering with the machine operation.

14.Lapping machines :

a)Provision for starting the machine at the feed end only : the design shall be such that an operator at the feed end cannot start the machine without the co-operation of an operator at the delivery end and that he cannot interfere with the device necessitating co-operation.

b)A "sight panel" fitted to the feed table in such position that operators on either side of the machine can see through to the other side.

c)The hand wheel on the driving shaft shall be of the disc type and it shall be located at sufficient distance from the machine gable to permit of fencing being constructed between it and the lever mechanism operating the folder.

d)The treadle mechanism shall be such as to allow extraction of the maximum cloth lapped and no worker shall be required to go up on the machine table to force it down.

15.Sewing machines:

An apron plate shall be fitted in front of the feed chain and the plate shall be without holes or openings except for slots for the jocky pulleys.

16.Press pits :

When the press table is level with the floor the clearance between it and the floor shall not be less than 10.16 cm.

Schedule III

Cotton Ginning Machinery

1.The line shaft or second motion in cotton ginning factories when below floor level, shall be completely enclosed by a continuous wall or unclimbable fencing with only so many openings as are necessary for access to the shaft for removing cotton seed, cleaning and oiling, and such openings shall be provided with gates or doors, which shall be kept closed and locked.

2.The bars portions of the line shaft between the bearings and also of the projection at the ends of the line shaft shall be provided with adequate inverted "U" or sleeve type of guards of substantial construction.

Schedule IV

Wood Working Machinery

1.Definitions.- For the purposes of this schedule-

a)"Wood working machine" means a circular saw, band saw, planning machine, chain mortising machine or vertical spindle moulding machine operating on wood or cork :

b)"Circular saw" means a circular saw working in a bench (including a rack bench), but does not include a pendulum or similar saw which is moved towards the wood for the purpose of cutting operations :

c)"band saw" means a band saw, the cutting portion of which runs in a vertical direction but does not include a log saw or band re-sawing machine; and

d)"Planning machine" means a machine for overhand planning or for thicknessing or for both operations.

2.Stopping and starting device. – An efficient stopping and starting device shall be provided on every woodworking machine. The control of this device shall be in such a position as to be readily and conveniently operated by the person in charge of the machine. For every electrical motor driven woodworking machine, "on and off" position in respect of every switch shall be marked prominently. The starting switches

and devices shall be so guarded as to prevent accidental and inadvertent starting of the machine.

3.Space around machine. - The space surrounding every woodworking machine in motion shall be kept free from obstruction. There should be ample space around each machines to enable the operator to handle pieces of timber without interfering with other machines. Sufficient room for stacking of material and passages for movement of persons to be adequate. Accumulation of scrap and shavings should be avoided to eliminate fire hazard. Finished and un-finished timber should be piled safely and neatly and attention to good house keeping should be given.

4.Floors. – The floor surrounding every woodworking machine shall be maintained in good and level condition and shall not be allowed to become slippery and as far as practicable shall be kept free from chips or other loose materials.

5.Lighting. – The machine should be located in relation to natural and artificial lighting so that the point of operation is adequately illuminated. Reflected glare and shadows shall be avoided.

6.Earth Connection. – The metal frame work of all machines having electric motors attached to them shall be effectively electrically grounded which shall be maintained in good condition.

7.Working surfaces. – The working surfaces of all machines shall be of a height which would contribute a minimum of fatigue for the operator and shall provide for easiness of operation. If necessary, a substantial platform securely fastened to the floor and of compensating height be provided, if the operator is of less than average stature and the working table can not be lowered to adjust. The height of auxiliary tables and supports should also be the same height as of the machine as far as practicable. Recommended average height from working floor to working surfaces are 36”for hand feed circular saws, 32” for power feed circular saws, 42”
for band saws, and 36” for shaper sand jointers. The working surface shall be kept entirely free from chips, scraps and wastes.

8.Exhaust system. – Local exhaust system shall be provided for removal of saw dust and chips at the source.

9.Stacking and Storing of Materials. – Finished, semi-finished, un-finished materials in a wood-working factory shall be neatly arranged and safely stacked providing enough space for free movement of men and materials.

10.Protective cloth. – Mistress, operators and helpers should wear tight fitting clothes. Aprons of heavy leather or other suitable materials will be provided to all workers. Suitable caps or head covers, safely spectacles, gloves, mittens shall be provided to the workers. The workers shall be supplied with masks.

11.Mechanical feeding. – Mechanical feeding devices shall be adopted in preference to manual feeding wherever possible. In case of any controversy regarding possibility of adopting mechanical feeding devices, the matter shall be referred to the Chief Inspector whose decision in this regard shall be final.

12.Circular saws. – Every circular saw shall be fenced as follows :

a)behind and in direct line with the saw there shall be riving knife, which shall have a smooth surface, shall be strong, rigid and easily adjustable, and shall also conform to the following conditions :-

i)the edge of the knife nearer the saw shall form an arc of a circular having a radius not exceeding the radius of the largest saw used on the bench :

ii)the knife shall be maintained as close as practicable to the saw,

having regard to the nature of the work being done at the time, and at the level of the bench table the distance between the front edge of the knife and the teeth of the saw shall not exceed 12 millimeters :

iii)for a saw of a diameter of less than 60 centimeters, the knife shall extend upwards from the bench table to within 25 millimeters of the top of the saw, and for a saw of a diameter 60 centimeters or over shall extend upwards from the bench table to a height of at least 23 centimeters :

b)the top of the saw shall be covered by a strong and easily adjustable guard, with a flange at the side of the saw farthest from the fence. The guard shall be kept so adjusted that the said flange shall extend below the roots of the teeth of the saw. The guard shall extend from the top of the riving knife to a point as low as practicable at the cutting edge of the saw : and

c)the part of the saw below the bench table shall be protected by two plates of metal or other suitable material, one on each side of the saw; such plates shall not be more than 15 centimeters apart, and shall extend from the axis of the saw outwards to a distance of not less than 5 centimeters beyond the teeth of the saw. Metal plates, if not beaded, shall be of a thickness of at least 2.5 millimeters, or, if beaded, be of a thickness of at least 1.25 millimeters.

d)Hood or Crown Guard. – The crown of the saw shall be covered by an adjustable hood with an inverted 'U' or 'L' section of adequate strength.

The material of the guard will not shatter if cutter is broken, be non-explosive and not more flammable than wood.

13.Push sticks. – A push stick or other suitable appliance shall be provided for use at every circular saw and at every vertical spindle moulding machine to enable the work to be done without unnecessary risk.

14.Band saws. – Every band saw shall be guarded as follows :

a)both sides of the bottom pulley shall be completely encased by sheet or expanded metal or other suitable material;

b)the front of the top pulley shall be covered with sheet or expanded metal or other suitable material; and

c)all sides of the blade shall be enclosed or otherwise securely guarded, except the portion of the blade between the bench table and the top guide.

15.Planning machines. –

1) A planning machine (other than a planning machine which is mechanically fed) shall not be used for overhead planning unless it is fitted with a cylindrical cutter block.

2)Every planning machine used for overhand planning shall be provided with a "bridge" guard capable of covering the full length and breadth of the cutting slot in the bench, and so constructed as to be easily adjusted both in a vertical and horizontal direction.

3)The feed roller of every planning machine used for thicknessing, except the combined machine for overhead planning and thicknessing, shall be provided with an efficient guard.

16.Vertical spindle moulding machines :

1)The cutter of every vertical spindle moulding machine shall be guarded by the most efficient guard having regard to the nature of the work being performed.

2)The wood being moulded at a vertical spindle moulding machine shall, if practicable, be held in a jig or holder of such construction as to reduce as far as possible the risk of accident to the worker.

17.Chain mortising machines. – The chain of every chain mortising machine shall be provided with a guard which shall enclose the cutters as far as practicable.

18.Adjustment and maintenance of guards. – The guards and other applicances required under this schedule shall be :

a)maintained in an efficient state;

b)constantly kept in position while the machinery is in motion;

c)so adjusted as to enable the work to be done without unnecessary risk, and

d)Cutters shall be well balanced to avoid creation of unbalanced centrifugal forces. They shall be through and straight and shall be sharp at all times.

19.Exemptions. – Paragraphs 12, 14, 15 and 16 shall not apply to any woodworking machine in respect of which it can be proved that other safeguards are provided, maintained and used which render the machine as safe as it would be if guarded in the manner prescribed in this schedule.

Schedule V

Rubber Mills and Plastic Mills

1.Definition –

i)A "Rubber Mill" shall mean machine with rollers used in breaking down, cracking, washing, grating, mixing, refining and warming of rubber or rubber goods.

A "Plastic Mill" shall mean machine with rollers used in breaking down, cracking, washing, grating, mixing, refining and warming of plastic or plastic goods.

ii)A "Calendar" shall mean machine with rolls used for fractioning, sheeting, coating and breading of rubber compounds and plastic or plastic compounds.

2.Installation of machine: Rubber and plastic mills shall be so installed that the top of the front roll is not less than 100 cm above the floor or working level;

3.Safety devices –

1)Rubber and plastic mills shall be equipped with;

a)hoppers so constructed or guarded that it is impossible for the operators to come into contact in any manner with the nip of the rolls; or

b)horizontal safety-trip rods or tight wire cables across both front and rear, which will, when pushed or pulled, operate instantly to disconnected the power and apply the brakes, or to reverse the rolls.

c)Safety-trip rods or tight wire cables on rubber mills shall extend across the entire length of the face of the rolls and shall be located not more than 170 cm above the floor or working level.

2)Calendar machines shall be equipped with

a)Horizontal safety-trip or tight wire across both front and rear, which will when pushed or pulled operate instantly disconnect the power and apply the brakes or to reverse the roll;

b)Safety-trip rods or tight wire cables on calender machines shall extend across the entire length of the face of the roll and shall be located not more than 170 cms above the floor or working level; c)on each side of all calendars and ;near both ends of the face of the rolls there shall be a vertical tight wire cable connecting with the bar tripping mechanism at the top and fastened to the frame within 30 cm of the floor. These cables should be positioned and a distance of not more than 30 cm from the face of the roll and a distance of not less than 25 mm from the calendar frame.

3.Maintenance and safety devices. – Safety trip rods and tight wire cables on all rubber mills and calendars shall be examined and tested daily in the presence of the Manager or other responsible person and if any defect is disclosed by such examination and test, the mill shall not be used until such defect has been remedied.

4.Injection Moulding Machine. –

a)An electrical interlock arrangement shall be provided so that the moulds cannot be closed unless the front safety gate is fully closed and on opening the front safety gate is fully closed and on opening the front safety gate, the moulds will stop automatically.

b)In addition to the above arrangement an hydraulic safety shall also be incorporated with the front safety gate. This shall prevent the tail stock mould plate from moving forward on opening of the front safety gate.

c)At the rear of the machine, there shall be provided either an efficient fixed guard or a sliding gate which shall be electrically inter-locked with the movement of the mould plates in the manner of the front safety gate as required under a) above so as to prevent access to the danger zone of the moulds in motion from the rear.

Schedule VI

Centrifugal Machines

1.Definition. –

"Centrifugal machines" include centrifugal extractors, separators and driers.

2.Every part of centrifugal machine shall be –

a)of good design and construction and of adequate strength;

b)properly maintained; and

c)examined thoroughly by a competent person at regular intervals.

3.Interlocking guard for drum or basket. –

1)The cage housing the rotating drum or basket of every Centrifugal machine shall be provided with a strong lid. The design and construction of the cage as well as the lid should be such that no access is possible to the drum or basket when the lid is closed.

2)Every centrifugal machine shall be provided with an efficient interlocking device that will effectively prevent the lid referred to in sub-paragraph (i) from being opened while the drum or basket is in motion and prevent the drum or basket being set in motion while the lid is in the open position.

4.Breaking arrangement. –

Every centrifugal machine shall be provided with an effective braking arrangement capable of bringing the drum or basket to rest within as short a period of time as reasonably practicable after the power is cut off.

5.Operating speed. – No centrifugal machine shall be operated at a speed in excess of the manufacturer's rating which shall be legibly stamped at easily visible places both on the inside of the basket and on the outside of the machine casing.

6.Exceptions. – Sub-paragraph (2) of paragraph 3, paragraphs 4 and 5 shall not apply in case of top lung machines or similar machines used in the sugar manufacturing industry.

Schedule VII

Power press

1.Application:- The schedule shall apply to all types of power presses including press brakes, except when used for working on hot metal.

2.Definition:- For the purpose of this Schedule –

a)"approved" means approved by the Chief Inspector:-

b)"fixed fencing" means fencing provided for the tools of a power press being fencing which has no moving part associated with or dependent upon the mechanism of a power and includes that part of a closed tool which acts as a guard;

c)"Power press" means a machine used in metal or other industries for moulding, pressing, blanking raising drawing and similar purposes;

d)“Safety device” means the fencing and any other safeguard provided for the tools of a power press.

3.Starting and stopping mechanism:-

The starting and stopping mechanism shall be provided with a safety stop so as to prevent over running of the press or descent of the ram during tool setting, etc.

4.Protection of tool and die:-

1)Each press shall be provided with a fixed guard with a slip plate on the underside enclosing the front and all sides of the tool.

2)Each die shall be provided with a fixed guard surrounding its front and sides, and extending to the back in the form of a tunnel through which the pressed article falls to the rear of the press.

3)The design, construction and mutual position of the guards referred to in (1) and (2) shall be such as to preclude the possibility of the worker’s hand or fingers reaching the danger zone.

4)The machine shall be fed through a small aperture at the bottom of the die guard, but a wider aperture may be permitted for second or subsequent operations if feeding is done through a chute.

5)Notwithstanding anything contained in sub-clauses (1) and (2) an automatic or an inter-locked guard may be used in place of a fixed guard, but where such guards are used they shall be maintained in an efficient working condition and if any guard develops a defect, the power press shall not be operated unless the defect of the guard is removed.

5.Appointment of persons to prepare power presses for use:-

1)Except as provided in sub-paragraph (4), no person shall set, re-set, adjust or try out the tools on a power press or install or adjust any safety device thereon, being installation or adjustment preparatory to production of die proving, or carry out an inspection and test of any safety device thereon required by paragraph 8 unless he-

a)has attained the age of eighteen;

b)has been trained in accordance with the sub-paragraph (2); and

c)has been appointed by the occupier of the factory to carry out those duties in respect of the class or description of power press or the class or description of safety device to which the power press or the safety device (as the case may be) belongs; and ; the name of every such person shall be entered in register in

Form 14.

2)The training shall include suitable and sufficient practical instruction in the matters in relation to each type of power press and safety device in respect of which it is proposed to appoint the person being trained.

6.Examination and testing of power presses and safety devices:-

1)No power press or safety device shall be taken into use in any factory for the first time in that factory, or in case of a safety device for the first time on any power press, unless it has been thoroughly examined and tested in the case of power press, after installation in the factory, or in the case of a safety device, when in position on the power press in connection with which it is to be used.

2)No power press shall be used unless it has been thoroughly examined and tested by a competent person within the immediately preceding period of twelve months.

3)No power press shall be used unless every safety device (other than fixed fencing) thereon has within the immediately preceding period of six months when in position on that power press, been thoroughly examined and tested by a competent person.

4)The competent person carrying out an examination and test under the foregoing provisions shall make a report of the examination and test containing the following particulars and every such report shall be kept readily available for inspection;

a)name of the occupier of the factory;

b)address of the factory;

c)identification number or mark sufficient to identify the power press or the safety device;

d)date on which the power press or the safety device was first taken into use in the factory;

e)the date of each periodical thorough examination carried out as per requirements of sub-paragraph (2) above;

f)Particulars of any defects effecting the safe working of the power press or the safety device found at any such thorough examination and steps taken to remedy such defects.

7.Defects disclosed during a thorough examination and tests. -

1)Where any defect is disclosed in any power press or in any safety device by any examination and test under paragraph 6 and in the opinion of the competent person carrying out the examination and test, either -

a)the said defect is a cause of danger to workers and in consequence the power press or safety device (as the case may be) ought not to be used after the expiration of a specified period unless the said defect has been remedied; such defect shall, as soon as possible after the completion of the examination and test, be notified in writing by the competent person to the occupier of the factory and, in the case of a defect falling withing clause (1) of this sub-paragraph such notification shall include the period within which, in the opinion of the competent person, the defect ought to be remedied.

2) In every case where notification has been given under this paragraph, a copy of the report made under paragraph 6(4) shall be sent by the competent person to the inspector for the area within 14 (fourteen) days of the completion of the examination and test.

3)Where any such defect is notified to the occupier in accordance with the foregoing provisions of this paragraph the power press or safety device (as the case may be) having the said defect shall not be used –

a) in the case of a defect falling within clause (a) of subparagraph (1) until the said defect has been remedied; and

b)in the case of defect falling within clause (b) of subparagraph (1), after the expiration of the said defect has been remedied.

4)As soon as is practicable after any defect of which notification has been given under sub-paragraph (1) has been remedied, a record shall be made by or on behalf of the occupier starting the measures by which and the date on which the defect was remedied.

8.Inspection and test of safety device. –

1)No power press shall be used after the setting , resetting or adjustment of the tools thereon unless a person appointed or authorized for the purpose under Paragraph 5 has inspected and tested every safety device thereon while it is in position on the said power press;

Provided that an inspection, test and certificate as aforesaid shall not be required where any adjustment of the tools has not caused or resulted in any alteration to or disturbance of any safety device on the power press and if, after the adjustment of the tools, the safety devices remain, in the opinion of such a person as aforesaid, in efficient working order.

2)Every power press and every safety device thereon while it is in position on the said power press shall be inspected any tested by a trained person every day.

9.Defects disclosed during an inspection and test. –

1)Where it appears to any person as a result of any inspection and test carried out by him under paragraph 8 that any necessary safety device is not in position or is not properly in position on a power press or that any safety device which is in position on a power press is not in his opinion suitable, he shall notify the manager forthwith.

2)Except as provided in sub-paragraph (3) where any defect is disclosed in a safety device by any inspection and test under paragraph 8, the person carrying out the inspection and test shall notify the manager forthwith.

3)Where any defect in a safety device is the subject of a notification in writing under paragraph 7 by virtue of which the use of the safety device may be continued during a specified period without the said defect having been remedied, the requirement in sub-paragraph (2) of this paragraph shall not apply to the said defect until the said period has expired.

10.Identification of power presses and safety devices. – For the purpose of identification every power press and every safety device provided for the same shall be distinctively and plainly marked.

11.Training and instructions to operators. – The operators shall be trained and instructed in the safe method of work before starting work on any power press.

12.Exemption. –

1)If in respect of any factory, the Chief Inspector is satisfied that owing to the circumstances or infrequency of the processes or for any other reason, all or any of the provisions of this schedule are not necessary for the protection of the workers employed on any power press or any class or description of power or in the factory, the Chief Inspector may by a certificate in writing (which he may in his discretion revoke at any time),

exempt such factory from all or any of such provisions subject to such conditions, if any, as he may specify therein.

2)Where such exemption is granted, a legible copy of the certificate, showing the conditions (if any) subject to which it has been granted, shall be kept posted in the factory in a position where it may be conveniently read by the persons employed.

Schedule VIII

Shears, Slitters and Guillotine Machines

1.Definition. – For the purpose of this schedule –

a)"guillotine" means a machine ordinarily equipped with straight, bevel-edged blade operating vertically against a stationery resisting edge and used for cutting metallic or non-metallic substances;

b)"shears" or "shearing machine" means a machine ordinarily equipped with straight, bevel-edged blades operating vertically against resisting edges, or with rotary, overlapping cutting wheels, and used for shearing metals or non-metallic substances;

c)"slitter" or "slitting machine" means a machine ordinarily equipped with circular disc-type knives, and used for trimming or cutting into metal or non-metallic substances or for slitting them into narrow strips; for the purpose of this schedule, this term includes bread or other food slicers equipped with rotary knives or cutting discs.

2.Guillotine and Sheers. –

1)Where practicable, a barrier metal guard of adequate strength shall be provided at the front of the knife, fastened to the machine frame and shall be so fixed as would prevent any part of the operator's body to reach the descending blade from above, below or through the barrier guard or from the sides;

Provided that in case of machines used in the paper printing and allied industries; where a fixed barrier metal guard is not suitable on account of the height and volume of the material being fed, there shall be provided suitable starting devices which require simultaneous action of both the hands of the operator or an automatic device which will remove both the hands of the operator from the danger zone at every descent of the blade.

2)At the back end of such machines, an inclined guard shall be provided over which the slit pieces would slide and be collected at a safe distance in a manner as would prevent a person at the back from reaching the descending blade.

1 Power-driven guillotine cutters, except continuous feed trimmers, shall be equipped with –

1starting devices which require the simultaneous action of both hands to start the cutting motion and of at least one hand on a control during the complete stroke of the knife; or

2 an automatic guard which will remove the hands of the operator from the danger zone at every descent of the blade, used in conjunction with one-hand starting devices which require two distinct movements of the device to start the cutting motion, and so designed as to return positively to the non starting position after each complete cycle of the knife.

2 Where two or more workers are employed at the same time on the same power-driven guillotine cutter equipped with two-hand control the device shall be so arranged that each worker shall be required to use both hands simultaneously on the safely trip to start the cutting motion, and at least one hand on a control to complete the cut.

3 Power-driven guillotine cutters, other than continuous trimmer, shall be provided, in addition to the brake or other stopping mechanism, with an emergency device which will prevent the machine from operating in the event of failure of the brake when the starting mechanism is in the non-starting position.

3.Slitting Machines :

1)Circular disc-type knives on machines for cutting metal and leather paper, rubber, textiles or other non-metallic substances shall, if within reach of operators standing on the floor or working level, if within reach of operators standing on the floor or working level, be provided with guards enclosing the knife edges at all times as near as practicable to the surface of the material, and which may either –

a)automatically adjust themselves to the thickness of the material; or

b)be fixed or manually adjusted so that the space between the bottom of the guard and the material will not exceed 6mm(0.25”) at any time.

2)Portion of blades underneath the tables or benches of slitting machines shall be covered by guards.

4.Index cutters and Vertical paper Slotters :

Index cutters, and other machines for cutting strips from the ends of book, and for similar operations, shall be provided with fixed guards, so arranged that the fingers of the operators can not come between the blades and the tables.

5.Corner Cutters;

Corner cutters,. used in the manufacture of paper boxes, shall be equipped with –

a) Suitable guard, fastened to the machines in front of the knives and provided with slots or perforations to afford visibility of the operations; or

b) other guards equally efficient for the protection of the fingers of the workers.

6.Band knives :

Band Wheels on band knives, and all portions of the blades except the table on vertical machines, or between the sliding guide and the table on vertical machines, or between the wheel guards on horizontal machines, shall be completely enclosed with hinged guards of sheet metal not less than 1 mm (0.04″)in thickness or of other material of equal strength.

Schedule IX

Agitators and Mixing Machines

1. Definition. – "Agitators and Mixing Machines" means a tank or other container equipped with power-driven mixing arms, blades or paddle wheels fixed to revolvable shafts or other simple mechanical devices for blending stirring liquids with other liquids or with solid substances or combinations of these.
2. When the top of an open agitator tank, beater tank, tank or paddle tank or a similar vessel is less than 1 M above the adjacent floor or working level, adequate standard railings shall be installed on all open sides.
3. Agitators and mixing machines shall be provided with an efficient inter-lock arrangement for the top lid, to prevent access to the agitating, stirring or similar devices, whilst in motion and would prevent restart under power with the lids in open position.
4. When other inspection or examination openings are provided at the top or sides of the containers vessels of the agitator and mixing machines, such openings shall be provided with standard grill guards as would prevent access of any part of operator's body coming in contact with agitating, stirring or similar devices, whilst in motion inside the vessel.

Schedule X

Leather, Plastic and Rubber Stripper Machines

Strippers for trimming or punching tanned hides, plastic or rubber sheets in leather making footwear manufacturing or in similar industries shall be provided with suitable devices which require simultaneous action of both the hands of the operator or an automatic device which will remove both the hands of the operator from the danger zone at every descent of the blade, punch or stripper cutter.

Schedule XI

1.Special Rule for printing presses.

In printing works, every printing machine driven by power shall be fitted with an efficient finger guard and every guillotine machine, driven by power, with an efficient knife-guard.

2.Special rule for tea factories.

In tea factories, the roll table shall be fenced to the satisfaction of the Inspector and brushes shall be provided to the workers for the purposes of sweeping the roll table.

3.Special rule for bricks and tiles works.

In brick and tiles works, a finger-guard shall be fitted at the feed end to the full length of the mould of every revolving press.

4.Special rule for decorticating factories.

In decorticating factories, the beater arms and the feed mouth of the decorticator shall, as far as practicable, be guarded as follows:-

A grating of 19 millimeters diameter wrought iron rods spaced 64 millimeters apart and supported by iron stiffeners 5.1 centimeters by 6 millimeters thick shall be fixed at a height of 15.2 centimeters above to the tip of the beater arms. A strong wooden plank 38 millimeters thick and iron plated on the underside shall be clamped with bolts and nuts over this grating, leaving a space of 20.3 centimeters wide for the feeding of groundnuts. A grating of 2.5 centimeters diameter wraught iron rods spaced 38 millimeters apart shall be fixed at a height
of 12.7 centimeters just above the feed mouth and another wooden plank 22.9 centimeters wide shall be fixed over the full length of the decorticator platform.

5.Special rules for factories in which polishing and grinding machinery are in use.

Safety devices:-

a)All collars, set screws, shafts, couplings, clutches, keys and belts in polishing and grinding machinery shall be effectively guarded.

b) i) Defect wheels shall not be used.

ii)Grinding wheels shall fit freely on their spindles. They shall never be forced on, nor shall they be let loose on spindles.

iii)The soft metal bushings at the centre shall not extend beyond the sides of the wheels.

iv)Whenever possible, a compressible medium, such as blotting paper, rubber or similar material, at least as large in diameter as that of the flanges, shall be fitted between a wheel and each of its flanges.

v)Projecting arbor ends of grinding and polishing wheels shall effectively guarded.

c)Except with the written permission of the Chief Inspector no emery or abrasive wheel shall be kept unprovided with a strong iron cover guard that shall enclose the wheel as far as practicable to retain fragments in the event of bursting. The guard shall be securely attached to the frame of the machine or other solid foundation.

d)Where workers are employed continuously on dry grinding or polishing wheels, such wheels shall be provided with an efficient exhaust system capable of drawing off dust particles.

e)Wheels shall not be operated at a speed in excess of that which is recommended by the manufacturer.

Schedule XII

All factories

a)Wherever practicable and considered necessary by the Inspector, service platforms and gangways shall be provided for overhead shafting and where required by him these shall be securely fenced with guards, rails and toe boards. b)Safe access shall be provided to all bearing clutches, belt shifting levers and all such other appliances which are required to be handled or operated while the machinery is at work.

c)All ladders used in replacing belts or in attending similar overhead machinery shall be specially made for that work and provided with hooks or an effective non-skid device.

d)No transmission machinery in motion shall be cleaned with cotton waste rags or similar materials held in hand.

e)All belts shall be regularly examined to ensure that the joints are safe and the belts are kept in proper tension.

f)Each water gauge glass of a boiler shall be fitted with an efficient guard.

g)All condenser pipes of steam engines and exhaust pipes of oil engines shall be adequately guarded.

Rule 68. Register of workers employed for work on or near machinery in motion:-

In every factory a register shall be maintained in Form 12 in which the name and other particulars of every such worker as may be employed for such examination or operation as referred to in the proviso to sub-section (1) of section 21 shall be entered.

Rule 69. Tight fitting clothing –

A worker required to wear tight fitting clothing under subsection (1) of section 22 shall be provided by the occupier with such clothing which shall consist of at least a pair of closely fitting shorts and a closely fitting half sleeves shirt or vest. Such clothing shall be returned to the occupier on termination of service or when new clothing is provided.

Rule 70. All Belts Etc. To Be Examined Regularly:

All belts shall be regularly examined to ensure that the joints are safe and the belts are at proper tension. The manager of the factory shall maintained a record of such examination indicating the date of examination and the person by whom examined and his opinion. This register shall be produced before the Inspector when he wants.

Rule 71. Employment of young persons on dangerous machines:

a)Power presses other than hydraulic presses.

b)Milling machines used in the metal trades.

c)Shears slitters and Guillotine machines.

d)Wood working machines.

e)Decorticator machines.

f)Platen printing machines.

g)Centrifugal machines.

Rule 72. Hoists and Lifts:-

1.A register in Form 13 shall be maintained by the manager to record the particulars of examination of hoists and lifts of a factory.

2.Examination of certain hoists and lifts:-

In pursuance of the provisions of sub-section (4) of section 28, in respect of any clase or description of hoist or lift specified in the first column of the following schedule, the requirements of section 28 specified in

the second column of the said schedule and set opposite to that class or description of hoist or lift shall not apply.

SCHEDULE

Class or Description of Hoist or Lift	Requirement which shall not apply
Hoists or Lifts, mainly used for raising materials for charging blast furnace or lime kilns	Sub-Sec 1(b) in so far as it requires a gate at the bottom landing; Sub-Sec 1(d); Sub-Sec 1(e)
Hoists not connected with mechanical power and which are not used for carrying persons.	Sub-Sec 1(b) in so far as it requires the hoistway or liftway enclosures to be so constructed as to prevent any person or thing from being trapped between any part of the hoist or lift and any fixed

Rule 73. Lifting machines, chains, ropes and lifting tackles:-

1.No lifting machine and no chain, rope or lifting tackle, except a fibre rope or fibre rope sling, shall be taken into use in any factory for the first time in that factory unless it has been tested and all parts have been thoroughly examined by a competent person and a certificate of such a test and examination specifying the safe working load or loads and signed by the person making the test and the examination, has been obtained and is kept available for inspection.

2.Every jib-crane so constructed that the safe working load may be varied by the raising or lowering of the jib, shall have attached thereto either an automatic indicator of safe working loads or an automatic jib angle indicator and a table indicating the safe working loads at corresponding inclinations of the jib or corresponding radii of the road.

3.A table showing the safe working loads of every kind and size of chain, rope or lifting tackle in use, and, in the case of a multiple sling, the safe working loads at different angles of the legs, shall be posted in the store room or place, where or in which the chains, ropes or lifting tackles are kept, and in prominent positions on the promises, and no chain, rope or lifting tackle not shown in the table shall be used:
Provided that this sub-rule shall not apply in respect of such lifting tackle of the safe working load thereof, or in the case of a multiple sling, the safe working load at different angles of the legs, is plainly marked upon it.

5.All rails on which a traveling crane moves and every tract on which the carriage of a transporter or runway moves shall be of proper size and adequate strength and have an even running surface; and every such rail or track shall be properly laid, adequately supported and properly maintained.

6.To provide access to rail tracks of overhead traveling cranes suitable passage-ways of at least 50 centimeters width with two boards and double hand rails 90 centimeters high shall be provided alongside, and clear of, the rail tracks of overhead traveling cranes, such that no moving part of the crane can strike persons on the ways, and the passage-way shall be at a lower level than the crane track itself. Safe access ladders shall be provided at suitable intervals to afford access to these passage-ways, and from passage-ways to the rail tracks.
Provided that the Chief Inspector may, for reasons to be specified in writing, exempt any factory in respect of any overhead traveling crane from the operation of any provision of this sub-rule subject to such conditions as he may specify.

7.All chains and lifting tackles except a rope sling shall, unless they have been subjected to such other heat treatment as may be approved by the Chief Inspector, be effectively annealed under the supervision of a competent person at the following intervals:

a)all chains, slings, rings, hooks, shackles and swivels used in connection with molten metal or molten slag or when they are made of 12.5 millimeters bar or smaller, once at least in every six months;

b)all other chains, slings, rings, hooks, shackles and swivels in general use, once at least in every twelve months:

Provided that chains and lifting tackle not in frequent use shall, subject to the Chief Inspector's approval, be annealed only when necessary.

Particulars of such annealing shall be entered in a register prescribed under sub-rule (4) which shall be kept available for inspection.

8. Nothing in the foregoing sub-rule (7) shall apply to the following classes of chains and lifting tackles:

a)chains made of malleable cast iron;

b)plate link chains;

c)chains, rings, hooks, shackles and swivels made of steel or of any non-ferrous metal;

d)pitched chains, working on sprocket or pocketed wheels;

e)rings, hooks, shackles and swivels permanently attached to pitched chains, pulley, blocks or weighing machines;

f)hooks and swivels having screw threaded parts or ball bearing or other case hardened parts;

g)socket shackles secured to wire ropes by white-metal capping; and

h)bordeaux connections;

i)any chain or lifting tackle which has been subjected to the heat treatment known as "Normalizing" instead of annealing.

Provided that such chains and lifting tackles shall be thoroughly examined by a competent person once atleast in every twelve months, and particulars entered in the register kept in accordance with sub rule (4).

9.No person under 18 years of age and no person who is not sufficiently competent and reliable shall be employed as driver of a lifting machine whether driven by mechanical power or otherwise, or to give signals to a driver.

10.All lifting machines, chains, ropes and lifting tackle except a fibre rope or fibre rope sling, which have been lengthened, altered or repaired by welding or otherwise shall, before being again taken into use, be adequately re-tested and re-examined by a competent person and a certificate of such test and examination be obtained and particulars entered in the register kept in accordance with sub-rule (4).

11.Where the Chief Inspector is satisfied that in a factory due to shut down or for any other persons it is not practicable to maintain a minimum distance of 6 meters between the person employed or working on or near the wheel track of a traveling crane and the crane, he may on the request of the manager reduce the distance to such extent as he may consider necessary and also prescribe further precautions indicating appointment of suitable number of supervisors to ensure the safety of the persons while they ;are employed or working on or near the track.

Rule 74. Pressure vessels or plant:

1.Interpretation. – In this rule –

a)"pressure vessel" means a vessel that may be used for containing, storing, distributing, transferring, distilling processing or otherwise handling any gas, vapour or liquid under pressure greater than the atmospheric pressure and includes any pipeline fitting or other equipment attached thereto or used in connection

therewith; and

b)"design pressure" means the maximum pressure that a pressure vessel or plant is designed to withstand safely when operating normally;

c)"maximum permissible working pressure" means the maximum pressure at which a pressure vessel or plant is permitted to be operated or used under this rule and is determined by the technical requirement of the process;

d)"plant" means a system of piping that is connected to a pressure vessel and is used to contain a gas vapour or liquid under pressure greater than the atmospheric pressure, and includes the pressure vessel;

e)"competent person" means a person who is, in the opinion of the Chief Inspector, capable by virtue of his qualification, training and experience, of conducting a thorough examination and pressure tests, as required on a pressure vessel or plant, and of making a full report on its condition.

2.Exceptions. – Nothing in this rule shall apply to –

a)vessels made of ferrous materials having an internal operating pressure not exceeding 1 kg per Square cm;

b)steam boilers, steam and feed pipes and their fittings coming under the purview of Indian Boilers Act, 1923;

c)metal bottles or cylinders used for storage or transport of compressed gases or liquefied or dissolved gases under pressure covered by the Gas Cylinder Rules, 1981 framed under the Indian Explosives Act, 1884; d)vessels in which internal pressure is due solely to the static head of liquid; e)vessels with a nominal water capacity not exceeding 500 litres connected in a water-pumping system containing air that is compressed to serve as a cushion;

f)vessels for nuclear energy application;

g)refrigeration plant having a capacity of 3 tons or less or refrigeration in 24 hours; and

h)working cylinders of steam engines or prime movers, feed pumps and steam traps; turbine casings; compressor cylinders; steam separators or dryers; steam strainers; steam de-super-heaters; oil separators; air receivers for fire sprinkler installations; air receivers of monotype machines provided the maximum working pressure of the air receiver does not exceed 1.33 kilograms per square centimeter and the capacity 85 litres; air receivers of electrical circuit breakers; air receivers of electrical relays; air vessels on pumps pipe coils, accessories of instruments and appliances such as cylinders and piston assemblies used for operating relays and interlocking type of guards; vessels with liquids subjected to static head only; and hydraulically operating cylinders other than any cylinder communicating with an air loaded accumulator.

3.Design and construction. – Every pressure vessel or plant used in a factory- a)shall be properly designed on sound engineering practice;

b)shall be of good construction, sound material, adequate strength and free from any patent defects;

c)shall be properly maintained in a safe condition;

Provided that the pressure vessel or plant in respect of the design ;and construction of which there is an Indian standard or a standard of the country of manufacture or any other low or regulation in force, shall be designed and constructed in accordance with the said standard law or

regulation, as the case may be and a certificate thereof shall be obtained from the manufacturer or from the competent person which shall be kept and produced on demand by an Inspector.

4.Safety devices. – Every pressure vessel shall be fitted with.

a)a suitable safety valve or other effective pressure relieving device of adequate capacity to ensure that the maximum permissible working pressure of the pressure vessel shall not be exceeded. It shall be set to operate at a pressure not exceeding the maximum permissible working pressure and when more than one protective device is provided, only one of the devices need be set to operate at the maximum permissible working pressure and the additional device shall be set to discharge at a pressure not more than 5 percent in excess of the maximum permissible working pressure;

b)a suitable pressure gauge with a dial range not less than 1.5 times the maximum permissible working pressure easily visible and designed to show at all times the correct internal pressure and marked with a prominent red mark at the maximum permissible working pressure of the pressure vessel;

c)a suitable nipple and globe valve connected for the exclusive purpose of attaching a test pressure guage for checking the accuracy of the pressure guage referred to in clause (b) of this sub-rule;

d)a suitable stop valve or valves by which the pressure vessel may be isolated from other pressure vessels or plant or source of supply of pressure. Such a stop valve or valves shall be located as close to the pressure vessel as possible and shall be easily accessible; and

e)a suitable drain cock or valve at the lowest part of the pressure vessel for the discharge of the liquid or other substances that may collect in the pressure vessel;

Provided that it shall be sufficient for the purpose of this sub-rule if the safety valve or pressure relieving device, the pressure guage and the stop valve are mounted on a pipeline immediately adjacent to the pressure vessel and where there is a range of two or more similar pressure vessels served by the same pressure lead, only one set of such mountings need be fitted on the pressure lead immediately adjacent to the range of pressure vessels, provided they cannot be isolated.

5.Pressure reducing devices:

a)Every pressure vessel which is designed for a working pressure less than the pressure at the source of supply or less than the pressure which can be obtained in the pipe connection the pressure vessel with any other source of supply, shall be fitted with a suitable pressure reducing valve or other suitable automatic device to prevent the maximum permissible working pressure of the pressure vessel being exceeded.

b)To further protect the pressure vessel in the event of failure of the reducing valve or device, at least one safety valve having a capacity sufficient to release all the steam, vapour or gas without undue pressure rise as determined by the pressure at the source of supply and the size of the pipe connecting the source of supply, shall be fitted on the low pressure side of the reducing valve.

6.Pressure vessel or plant being taken into use:

a)No new pressure vessel or plant shall be taken into force of this rule unless it has been hydrostatically tested by a competent person at a pressure at least 1.3 times the design pressure, and no pressure vessel or plant which

has been previously used or has remined isolated of idle for a period exceeding 2 months or which has undergone alterations or repairs shall be taken into use in a factory unless it has been thoroughly examined by a competent person externally and internally, if practicable, and has been hydrostatically tested by the competent person at a pressure which shall be 1.5 times the maximum permissible working pressure ;

Provided, however, that the pressure vessel or plant which is so designed and constructed that it cannot be safely filled with water or liquid or is used in service when even some traces of water cannot be tolerated, shall be pneumatically tested at a pressure not less than the design pressure or the maximum permissible working pressure as the case may be.

Provided further that the pressure vessel or plant which is lined with glass shall be tested hydrostatically or pneumatically as required at a pressure not less than the design pressure or maximum permissible working pressure as the case may be.

Design pressure shall be not less than the maximum permissible working pressure and shall take into account the possible fluctuations of pressure during actual operation.

b)No pressure vessel or plant shall be used in a factory unless there has been obtained from the maker of the pressure vessel or plant or froms the competent person a certificate specifying the design pressure or maximum permissible working pressure thereof, and stating the nature of tests to which the pressure vessel or plant and its fittings (if any) have been subjected, and every pressure vessel or plant so used in a factory shall be marked so as to enable it to be identified as to be the pressure vessel or plant to which the certificate relates and the certificate shall be kept available for perusal by the Inspector.

c)No pressure vessel or plant shall be permitted to be operated or used at a pressure higher than its design pressure, or the maximum permissible working pressure as shown in the certificate.

7.In-service test and examinations:

a)Every pressure vessel or plant in service shall be thoroughly examined by a competent person-

i)Externally, once in every period of six months;

ii)Internally, once in every period of twelve months;

Provided that if by reason of the construction of a pressure vessel or plant, a thorough internal examination is not possible, this examination may by replaced by a hydrostatic test which shall be carried out once in every period of two years.

Provided further that for a pressure vessel or plant in continuous process which cannot be frequently opened, the period of internal examination may be extended to four years; and

iii)hydrostatically tested once in every period of four years.

Provided that in respect of a pressure vessel or plant with thin walls, such as sizing cylinder made of copper or any other nonferrous metal, periodic hydrostatic test may be dispensed with subject to the condition that the requirements laid down in sub-rule (8) are fulfilled. Provided further that when it is impracticable to carry out thorough external examination of any pressure vessel or plant every six months as required in sub-clause (i) of this clause, or if owing to its construction and use a pressure vessel or

plant cannot be hydrostatically tested as required in sub-clause (ii) and (iii) of this clause, a thorough external examination of the pressure vessel or plant shall be carried out at least once in every period of two years, and at least once in every period of four years, a thorough systematic non-destructive test like ultrasonic test for metal thickness or other defects of all parts the failure of which might lead to eventual rupture of the pressure vessel or plant shall be carried out.

b)The pressure for the hydrostatic test to be carried out for the purpose of this sub-rule shall be 1.25 times the design pressure or 1.5 times the maximum permissible working pressure, whichever is less.

8.Thin walled pressure vessel or plant. –

a)In respect of any pressure vessel or plant of thin walls such as sizing cylinder made of copper or any other non-ferrous metal, the maximum permissible working pressure shall be reduced at the rate of 5 percent of the original maximum permissible working pressure for every year of its use after the first five years and no such cylinder shall be allowed to continue to be used for more than twenty years after it was first taken into use.

b)If any information as to the date of construction, thickness of walls, or maximum permissible working pressure is not available, the age of such pressure vessel or plant shall be determined by the competent person in consultation with the Chief Inspector from the other particulars available with the manager.

c)Every new and second hand pressure vessel or plant of thin walls to which repairs likely to affect its strength or safety have been carried out, shall be tested before use to at least 1.5 times its maximum permissible working pressure.

9.Report by competent person. –

a)If during any examination any doubt arises as to the ability of the pressure vessel or plant to work safely until the next prescribed examination, the competent person shall enter in the prescribed register his observations, findings and conclusions with other relevant remarks with reasons and may authorize the pressure vessel or plant to be used and kept in operation subject to a lowering of maximum permissible working pressure, or to more frequent or special examination or test, or subject to both of these conditions.

b)A report of every examination or test carried out shall be completed in Form 15 and shall be signed by the person making the examination or test, and shall be kept available for perusal by the Inspector at all hours when the factory or any part thereof is working.

c)Where the report of any examination under this rule specified any condition for securing the safe working of any pressure vessel or plant, the pressure vessel or plant shall not be used unless the specified condition is fulfilled.

d)The competent person making report of any examination under this rule, shall within seven days of the completion of the examination, send to the Inspector a copy of the report in every case where the maximum permissible working pressure is reduced or the examination shows that the pressure vessel or plant or any part thereof cannot continue to be used with safety unless certain repairs are carried out or unless any other safety measure is taken.

10.Application of other laws. –

a)The requirements of this rule shall be in addition to and without any

prejudice to and not in derogation of the requirements of any other law in force.

b)Certificate or reports of any examination, or test of any pressure vessel or plant to which sub-rules (7) to (9) do not apply, conducted or required to be conducted under any other law in force and other relevant record relating to such pressure vessel or plant, shall be properly maintained as required under the said law and shall be produced on demand by the Inspector.

Rule 75. Water-sealed gasholder:

1.The expression "gasholder" means a water-sealed gasholder which has a storage capacity of not less than 141.5 cubic meters.

2.Every gasholder shall be of adequate material and strength, sound construction and properly maintained.

3.Where there is more than one gasholder in a factory, every gasholder shall be marked in a conspicuous position with a distinguishing number or letter.

4.Every gasholder shall be thoroughly examined externally by a competent person at least once in a period of 12 months.

5.In the case of gasholder of which any lift has been in use for more than 10 years, the internal state of the sheeting shall, within one year of the coming into operation of these rules and thereafter at least once in every period of four years, be examined by a competent person by means of electronic or other accurate devices.

Provided that if the Chief Inspector is satisfied that such electronic or other accurate devices are not available, he may permit the cutting of samples from the crown and the sides of the holder.

Provided further that if the above examination raises a doubt, an internal visual examination shall be made.

6.All possible steps shall be taken to prevent or minimize ingress of impurities in the gasholder.

7.No gasholder shall be repaired or demolished except under the direct supervision of a person who, by his training experience and knowledge of the necessary precautions against risks of explosion and of persons being overcome by gas, is competent to supervise such work.

8. a) All sample discs cut under sub-rule (5) above shall be kept readily available for inspection.

b)A permanent register in Form 16 duly signed by the occupier or manager shall be maintained.

c)The result of examinations by the competent person carried out as required under sub-rules (4) and (5) shall be recorded in

Form 17.

d)A copy of the report in

Form 17 shall be kept in the register in Form 16 and both the register and the report shall be readily available for inspection.

9.The Inspector shall inspect the gasholder at least once in a period of 12 months.

Rule 76. Excessive weights:-

1.No man, woman, or young person shall unaided by another person, lift, carry or move by hand or on head any material article, tool or appliance exceeding the maximum limit in weight set out in the following schedule.

SCHEDULE

Persons.	Maximum weight of material, article, tool or appliance. a)
Adult male	50 kg.
b) Adult female	25 kg.
c) Adolescent male	20 kg.
d) Adolescent female	20 kg.
e) Male child	15 kg.
f) Female child	10 kg.

2.No man, Women young person shall engage, in conjunction with others, in lifting, carrying or moving by hand or on head any material article, tool or appliance, if the weight thereof exceeds the lowest weight fixed by the Schedule to sub-rule(1) for any of the persons engaged, multiplied by the number of the persons engaged.

Rule 77. Protection of eyes:-

Effective screens or suitable goggles shall be provided for the protection of persons employed in or in the immediate vicinity of the following processes:-

a)The processes specified in schedule I annexed hereto, being processes which involve risk of injury to eyes from particles or fragments thrown of in the course of the processes.

b)The processes specified in Schedule II annexed hereto, being processes which involve risk of injury to eyes by reason of exposure to excessive light or infra-red or ultraviolet radiations.

Schedule I

1. Breaking, cutting, dressing or carrying of bricks, stone, concrete, slag or similar materials by means of a hammer, chisel, pick or similar hand tool, or by means of a portable tool driven by mechanical power, and the dry grinding of surfaces of any such materials by means of a wheel or disc driven by mechanical power, where, in any of the foregoing causes, particles or fragments are liable to be thrown off towards the face of the operator in the course of the process.
2. Dry grinding of surfaces of metal by applying them by hand to a wheel, disc or band driven by mechanical power, and of surfaces of metal by means of a portable tool driven by mechanical power.
3. Dividing into separate parts of metal, bricks, stone, concrete or similar materials by means of a high speed saw driven by mechanical power or by means of an abrasive cutting-off wheel or disc driven by mechanical power, where particles or fragments are liable to be thrown off towards the face of the operator in the course of process.
4. Turning of metals or articles of metal, where particles or fragments are liable to be thrown off towards the face of the operator in the course of the process.
5. Drilling by means of portable tools, where particles or fragments are liable to be thrown off towards the face of the operator in the course of the process.
6. Welding and cutting of metals by means of an electric, oxy-acetylene or similar process.
7. Hot fettling of steel castings by means of a flux-injected burner or air torch, and de-seaming of metal.
8. Fettling of metal castings involving the removal of metal, including runners, gates and risers, and removal of any other material during the course of such fettling.
9. Chipping of metal, and chipping, knocking out, cutting out or cutting off of cold rivets, bolts, nuts, lugs, pins, collars or similar articles from any structure or plant, or from part of any structure or plant, by means of a hammer, chisel, punch or similar hand tool, or by means of a portable tool driven by mechanical power.
10. Chipping or scurffing of paint, scale, slag, rust or other corrosion from the surface of metal and other hard materials by means of a hand tool or by a portable tool driven by mechanical power.
11. Breaking of scrap metal by means of a hammer or by means of a tool driven by mechanical power.
12. Routing of metal, where particles or fragments are liable to be thrown off towards the face of the operator in the course of the process.
13. Work with drop hammers and power hammers used in either case for the manufacture of forgings, and work by any person not working with such hammers, whose work is carried on in such circumstances and in such a position that particles or fragments are liable to be thrown off towards his face during work with drop hammers or power hammers.
14. Work at a furnace where there is risk to the eyes from molten metal.
15. Pouring or skimming of molten metal.
16. Work involving risk to the eyes from hot sand being thrown off.
17. Turning or dressing of an abrasive wheel.
18. Handling in open vessels or manipulation of strong acids or dangerous corrosive liquids or materials, and operation, maintenance or dismantling of plant or any part of plant, being plant or part of plant which contains or has contained such acids, liquids or materials, unless the plant or part of plant has been so prepared (by isolation reduction

of pressure, or otherwise), treated, or designed and constructed as to prevent risk of injury.

19. Any other process wherein there is a risk of injury to eyes from particles or fragments thrown off during the course of the process.

Schedule II

1.Welding or cutting of metals by means of an electrical, oxy-acetylene or similar process.

2.All work on furnaces where there is risk of exposure to excessive light or infra-red radiations.

3.Process such as rolling, casting or forging of metals, where there is risk of exposure to excessive light or infra-red radiations.

4.Any other process wherein there is a risk of injury to eyes from exposure to excessive light or infra-red or ultraviolet radiations.

Rule 78. Minimum dimensions of man-holes:-

In any factory no person shall be allowed or required to enter in any chamber, tank, vat, pipe flue or other confined space, which persons may have to enter unless the said chamber, tank, vat, pope flue or other confined space, is provided with a man-hole which may be rectangular, oval or circular in shape unless there is other effective means of egress and -

a)in the case of rectangular or oval shape, be not less than shoulder width of the person concerned plus 8 cm. in length and 30 cm. wide;

b)in the case of a circular shape be not less than shoulder width of the person concerned plus 8 cm. in diameter.

Exemption under sub-section (5) of section (37)

Rule 79. Exemptions. The requirements of sub-section (4) of section 37 shall not apply to the following processes carried on in any Factory:-

a)The operation of repairing a water-sealed gas-holder by the electric welding process, subject to the following conditions:-

i)The gas-holder shall contain only the following gases, separately or mixed at a pressure greater than atmospheric pressure, namely, town gas, coke-oven gas, producer gas, blast furnace gas, or gases, other then air, used in their manufacture:

Provided that, this exemption shall not apply to any gasholder containing acetylene or mixture of gases, to which acetylene has been added intentionally; and

ii)Welding shall be done by the electric welding process and shall be carried out by experienced operatives under the constant supervision of a competent person.

b)The operations of cutting or welding steel or wrought iron gas mains and services by the application of heat, subject to the following conditions:

i)The main or service shall be situated in the open air, and it shall contain only the following gases, separately or mixed at a pressure greater than atmospheric pressure, namely, town gas, coke-oven gas, producer gas, producer gas, blast furnace gas, or gases other than air, used in their manufacture.

ii)The main or service shall not contain acetylene or any gas or mixture of gases to which acetylene has been added intentionally;

iii)The operation shall be carried out by an experienced person or persons and at least two persons (including those carrying out the operations) experienced in work on gas mains and over 18 years of age shall be present during the operation;

iv)The site of the operation shall be free from any inflammable or explosive gas or vapour;

v)Where acetylene gas is used as a source of heat in connection with an

operation, it shall be compressed and contained in a porous substance in a cylinder; and

vi)Prior to the application of any flame to the gas main or service, this shall be pierced or drilled and the escaping gas ignited.

c)The operation of repairing an oil tank on any ship by the electric welding process, subject to the following conditions:-

i)The only oil, contained in the tank shall have a flash point of not less than 150 of (close test) and a certificate to this effect shall be obtained from 2 competent analysts;

ii)The analyst's certificate shall be kept available for inspection by an Inspector, or by any person employed or working on the ship;

iii)The Welding operation shall be carried out only on the exterior surface of the tank at a place (a) which is free from oil or oil leakage in inflammable quantities and (b) which is not less than 30 centimeters below the nearest part of the surface of the oil within the tank; and

iv)Welding shall be done only by the electric welding and shall be carried out by experienced operatives under the constant supervision of a competent person.

Rule 80. Fire protection -

1)Processes, equipment, plant, involving serious explosion and serious fire hazards:-

a)All processes, storages, equipments, plants, etc. involving serious explosion and flash fire hazard shall be located in segregated buildings where the equipment shall be so arranged that only a minimum number of employees are exposed to such hazards at any one time.

b)All industrial processes involving serious fire hazard should be located in buildings or work places separated from one another by walls of fire-resistant construction.

c)Equipment and plant involving serious fire or flash fire hazard shall, wherever possible be so constructed and installed that in case of fire, they can be easily isolated.

d)Ventilation ducts, pneumatic conveyors and similar equipment involving a serious fire risk should be provided with flame arresting or automatic fire extinguishing appliance of fire resisting dampers electrically interlocked with heat sensitive/smoke detectors and the air-conditioning plant system.

e)In all workplaces having serious fire or flash fire hazard, passages between machines, installations or piles of material should be at least 90 cm. wide. For storage pile the clearance between the ceiling and Top of the pile should not be less than 2 meter.

2)Access for fire fighting:-

a)Buildings and plants shall be so laid out and roads, passageways etc. so maintained as to permit unobstructed access for fire fighting.

b)Doors, and window openings shall be located in suitable positions on all external walls of the building to provide easy access to the entire area within the building for fire fighting.

3)Protection against lightning:- protection from lightning shall be provided for:- a)building in which explosive or highly flammable substance are manufactured, used handle or stored.

b)storage tanks containing oils, paints, or other flammable liquids.

c)grain elevation;

d)buildings, tall chimneys or stacks where flammable gases, fumes, dust, or lint are likely to be present;

e)sub-station buildings and out door transformers and switch yards.

4)Explosive : All explosive shall be handled, transported, stored and used in accordance with the provisions of the Indian Explosive Act, 1884 (4 of 1894).

5)Precautions against ignition. - Wherever there is danger of fire or explosion from accumulation of flammable of explosive substances in air -

a)all electrical apparatus shall either be excluded from the area of risk or they shall be of such construction and so installed and maintained as to prevent the danger of their being a source of ignition;

b)effective measures shall be adopted for prevention of accumulation of static charges to a dangerous extent;

c)workers shall wear shoes without iron or steel nails or any other exposed ferrous materials which is likely to cause sparks by friction;

d)smoking, lighting or carrying of matches, lighters or smoking materials shall be prohibited.

e)transmission belts with iron fasteners shall not be used; and

f)all other precautions, as are reasonably practicable, shall be taken to prevent initiation of ignition from all other possible sources such as open flames, frictional sparks, overheated surfaces of machinery or plant, chemical or physical-chemical reaction and radiant heat.

6)Spontaneous ignition:- Where materials are likely to induce spontaneous ignition, care shall be taken to avoid formation of air pocket and to ensure adequate ventilation. The material susceptible to spontaneous ignition should be stored in dry condition and should be in heaps of such capacity and separated by such passage which will prevent fire. The materials susceptible to ignition and stored in the open shall be at a distance not less than 10 meters away from process or storage buildings.

7)Cylinders containing compressed gas:- Cylinders containing compressed gas may only be stored in open if they are protected against excessive variation of temperature, direct rays of sun, or continuous dampness. Such cylinders shall never be stored near highly flammable substances, furnaces or hot processes. The room where such cylinders are stored shall have adequate ventilation.

8)Storage of flammable liquids:-

a)The quantity of flammable liquids in any work room shall be the minimum required for the process or processes carried on in such room. Flammable liquids shall be stored in suitable containers with close fitting covers: provided that not more than 20 litres of flammable liquids having a flash point of 21^{0}C or less shall be kept or stored in any work room.

b)Flammable liquids shall be stored in closed containers and in limited quantities in well ventilated rooms of fire resisting construction which are isolated from the remainder of the building by fire walls and self closing fire doors.

c)Large quantities of such liquids shall be stored in isolated adequately ventilated building of fire resisting construction or in storage tanks, preferably underground and at a distance from any building as required in the Petroleum Rules,1976.

d)Effective steps shall be taken to prevent leakage of such liquids into basements, sumps or drains and to confine any escaping liquid within safe limits.

9)Accumulation of flammable dust, gas, fume or vapour in air or flammable waste material on the floors:-

a)Effective steps shall be taken for removal or prevention of the accumulation in the air of flammable dust, gas, fume or vapour to an extent which is likely to be dangerous.

b)No waste material of a flammable nature shall be permitted to accumulate on the floors and shall be removed at least once in a day or shift, and more often, when possible. Such materials shall be placed in suitable metal containers with covers wherever possible.

10)Fire exits:-

a)In this rule:-

i)"horizontal" exits" means an arrangement which allows alternative egress from a floor area to another floor at or near the same level in an adjoining building or an adjoining part of the same building with adequate separation and

ii)"travel distance" means the distance an occupant has to travel to reach an exit.

b)An exit may be doorway, corridor, passageway to an external stairway or to a verandah or to an internal stairway segregated from the rest of building by fire resisting walls which shall provide continuous and protected means or egress to the exterior of a building or to an exterior open space. An exit may also include a horizontal exit leading to an adjoining building at the same level.

c)Lifts, escalators and revolving doors shall not be considered as exits for the purpose of this sub-rule.

d)In every room of a factory exits sufficient to permit safe escape of the occupants in case of fire or other emergency shall be provided which shall be free of any obstruction.

e)The exits shall be clearly visible and suitably illuminated with suitable arrangement, whatever artificial lighting is to be adopted for this purpose, to maintain the required illumination in case of failure of the normal source of electric supply.

f)The exits shall be marked in a language understood by the majority of the workers.

g)Iron rung ladders or spiral staircases shall not be used as exit staircases.

h)Fire resisting doors or roller shutters shall be provided at appropriate places along the escape routes to prevent spread of fire and smoke, particularly at the entrance of lifts or stair where funnel or flue effect may be cleared inducing an upward spread of fire.

i)All exits shall provide continuous means of egress to the exterior of a building or to an exterior open space leading to a street.

j)Exits shall be so located that the travel distance to reach at least one of them on the floor shall not exceed 30 meters.

k)In case of those factories where high hazard materials are stored or used, the travel distance to the exit shall not exceed 22.5 metres and there shall be at least two ways of escape from every room, however small, except toilet rooms, so located that the points of access thereto are out of or suitable shielded from areas of high hazard.

l)Whenever more than one exit is required for any room space of floor, exits shall be placed as remote from each other as possible and shall be arranged to provide direct access in separate directions from any point in the area served.

m)The unit of exit width used to measure capacity of any exit shall be 50 cm. A clear width of 25 cm. shall be counted as an additional half unit. Clear width of less than 25 cm. shall not be counted for exit width.

n)Occupants per unit width shall be 50 for stairs and 75 for doors.

o)For determining the exits required, the occupant load shall be reckoned on the basis of actual number of occupants within any floor area or 10 square metres per person, whichever is more.

p)There shall not be less than two exits serving every floor area above and below the ground floor, and at least one of them shall be an internal enclosed stairway.

q)For every building or structure used for storage only, and every section thereof considered separately, shall have access to at least one exit so arranged and located as to provide a suitable means of escape for any persons may be normally present, at least two separate means of exit shall employ therein and in any such room wherein more than 10 persons be available, as remote from each other as practicable.

r)Every storage area shall have access to at least one means of exit which can be readily opened.

s) Every exit doorway shall open into an enclosed stairway, a horizontal exit on a corridor or passageway providing continuous and protected means of egress.

t) No exit doorway shall be less than 100 cm in width, Doorways shall be not less than 200 cm, in height.

u) Exit doorways shall open outwards, that is, away from the room but shall not obstruct the travel along any exit. No door when opened, shall reduce the required width of stairway or landing to less that 90 cm. Over head or sliding doors shall not be installed for this purpose.

v) An exit door shall not open immediately upon a flight of stairs. A landing at least 1.5m ×1.5m in size shall be provided in the stairway at each doorway. The level of landing shall be the same as that of the floor which it serves.

w) The exit doorways shall be open able from the side which they serve without the use of a key.

x) Exit, corridors and passageways shall be of a width not less than the aggregate required width of exit doorways leading the side.

y) Where stairways discharge through corridors and passageways, the height of the corridors and passageways shall not be less than 2.4 metres.

aa)Internal stairs shall be constructed of non-combustible materials throughout.

bb)Internal stairs shall be constructed as a self-contained unit with at least one side adjacent to external wall and shall be completely enclosed.

cc)A stair case shall not be arranged round a lift shaft unless the latter is totally enclosed by a material having a fire resistance rating not lower than that of the type of construction of the former.

dd)Hollow combustible construction shall not be permitted.

ee)The minimum width of an internal staircase shall be 100 cm.

ff)The minimum width of treads without nosing shall be 25 cm, for an internal staircase. The Treads shall be constructed and maintained in a manner to prevent slipping.

gg) The maximum height of a riser shall be 19 cm, and the number of risers shall be limited to 12 per flight.

hh) Hand rails shall be provided with a minimum height of 100 cm. and shall be firmly supported.

ii)To use of spiral staircase shall be limited to low occupant load and to building of height of 9 metres, unless they are connected to platforms such as balconies and terraces to allow escapees to pause.

A spiral staircase shall be not less than 300 cm. in diameter and have adequate head room.

jj)The width of a horizontal exit shall be same as for the exit doorways. kk)The horizontal exit shall be equipped with at least one fire door of self closing type.

ll)The floor area on the opposite or refuge side of a horizontal exit shall be sufficient to accommodate occupants of the floor areas served allowing not less than 0.3 square metre per person. The refuge area shall be provided with exits adequate to meet the requirements of this sub-rule. At least one of the exits shall lead directly to the exterior or street.

mm)Where there is difference in level between connected areas for horizontal exit, ramps not more than 1 in 8 slope be provided, for this purpose steps shall not be used.

nn)Doors in horizontal exits shall be openable at all times.

oo) Ramps with a slope of not more than 1 in 10 may be substituted for the requirements of staircase. For all slopes exceeding 1 in 10 and wherever the use is such as to involve danger of slipping, the ramp shall be surfaced with non-slipping material.

pp)In any building not provided with automatic fire alarm, a manual fire alarm system shall be provided if the total capacity of the building is over 500 persons, or if more than 25 persons are employed above or below the ground floor, except that no manual fire alarm shall be required in one-storey buildings where the entire area is undivided and all parts thereof are clearly visible to all occupants.

qq)The Chief Inspector may by an order in writing exempt any factory or part of it from all or any of the provisions of this rule to such extent and on such conditions as may be deemed necessary.

Rule 81. Means of Escape for Cotton Ginning Factories:-

Notwithstanding anything contained in rule 80 cotton ginning factories shall be provided with at least two suitable ramps or two flights of stairs made of brick work or other fire-resisting material.

Rule 82. Fire-fighting apparatus and water supply:-

1.First-aid fighting equipment -

In every factory there shall be provided and maintained adequate and suitable fire fighting equipment for fighting fires in the early stages, those being referred to as first-aid fire fighting equipment in this rule.

The types of first-aid fire fighting equipment to be provided shall be determined by considering the different types of fire risks which are classified

as follows:-

"Class A fire" - Fire due to combustible materials such as wood, textiles, paper, rubbish and the like.

"Light hazard" - Occupancies like offices, assembly halls, canteens, rest-rooms, ambulance rooms and the like;

"Ordinary hazard" - Occupancies like saw mills, carpentry shop, shall timber yards, book binding shops, engineering workshop and the like;

"Extra hazard" - Occupancies like large timber yards, godowns storing fibrous materials, flour mills, cotton mills, jute mills, large wood working factories and the like;

"Class B fire" - Fire in flammable liquids like oil, petroleum products, solvents, grease, paint, etc.

"Class C fire" - Fire arising out of gaseous substances.

"Class D fire" - Fire from reactive chemicals, active metals and the like.

"Class E fire" - Fire involving electrical equipment and delicate machinery and the like.

2. In every factory adequate provision of water-supply for fire fighting shall be made and where the amount of water required in liters per minute is 550 liters or more as calculated from the formula mentioned below, power-driven trailer pumps of adequate capacity shall be provided and maintained:-

$$\text{Water required in liters per minute} = \frac{A + B + C + D}{20}$$

A = the total area in square meters of all floors including galleries in all buildings of the factory.

B= the total area in square meters of all floors and galleries including open spaces in which combustible materials are handled or stored.

C= the total area in square meters of all floors and over 15 meter above ground level and

D= the total area in square meters of all floors of buildings other than those of fire resisting construction provided fire-resisting constructions of various floors is so certified by any Fire Association of Fire Insurance Company; Provided that, in areas where the fire risk involved does not require use of water such areas under B,C, or D may, for the purpose of calculation be halved;

Provided further that, where the areas under B,C,D are protected by permanent automatic fire-fighting installations approved by any Fire Association or Fire Insurance Company, such area/areas may, for the purpose of calculation be halved;

Provided also that, where the factory is situated at not more than 3 kilometers from an established city or town fire service, the pumping capacity based on the amount of water arrived at by the formula above may be reduce by 25 percent but no account shall be taken of this reduction in calculating water supply required under sub-rule (2)

3)Each trailer pump shall be provided with equipments as given schedule A. such equipment shall conform to Indian Standard specifications whenever they exist.

4)Trailer pump shall be housed in a separate shed which shall be sited close to a principal source of water supplies in the vicinity of the main risks of the factory. 5)In factories where the area is such as can not be reached by man hauling of trailer pumps within reasonable time, vehicles with towing attachment shall be provided at the scale of

one for every four trailer pumps with a minimum of one such vehicle kept available at all times.

6)Water-supply shall be provided to give flow of water as required under sub-rule (2)for at least 100 minutes. At least 50 percent of this water-supply or 4.50,000 litres which ever is less shall be in the form of overhead tanks of adequate capacities(not less than 45,000 litres each) distributed round the factory with due regard to the potential fire risks in the factory, (where piped supply is provided, the size of the main shall not be less than 15 cm. diameter and it shall be capable of supplying minimum of 4,500 litres per minute at a pressure of not less than 7kg/sq cm.

Every type of portable fire extinguisher shall be kept mounted in a position approved by the Inspector.

Provided that where the Chief Inspector is of the opinion that other adequate fire-fighting apparatus or permanent automatic fire-fighting installation approved by any recognized Fire Association or Fire Insurance Company are provided in the factory building or room, he may issue a certificate in writing (which he may at his discretion revoke) specifying the extent to which the above requirements are relaxed in respect of that building or room.

a)Every portable fire extinguisher to be provided shall -

i)conform to the appropriate Indian standards specifications;

ii)be kept charged ready for use properly mounted in a position approved by the Inspector and in accordance with the makers recommendation.

iii)be examined, tested or discharged periodically in accordance with the makers recommendation.

b)The manager of every factory shall keep and maintain, sufficient number of spare charges for each type of extinguisher provided in the factory with minimum of 12 spare charges always in stock and readily available.

7)Each factory shall detail a trained officer who shall be responsible for the proper maintenance and upkeep of all fire-fighting equipments.

8)If the Chief Inspector is satisfied in respect of any part of the factory that owing to the exceptional circumstances such as inadequacy of water supply or for infrequency of the manufacturing process or for any other reason, to be recorded in writing all or any of the requirements of the rules are impracticable or not necessary for the protection of workers, he may by order in writing (which he may at his discretion revoke) exempt such factory or part of that factory from all or any of the provisions of the rules subject to conditions as he may by such order prescribe.

Schedule – A

Equipment of trailer Pumps.

A. For light trailer pump (680 litres/min)

Nine metres length of armoured suction hose, with wrenches.

1 Metal suction strainer
1 Basket strainer
1 Two-way suction collecting-head
1 Suction adaptor.
10 Twenty-five metres lengths of unlined 75 mm delivery hose complete with quick-release couplings.
1 Dividing breeching-piece
2 Branch-piece with 15 mm nozzles.
1 Diffuser nozzle
1 Standpipe with blank cap
1 Hydrant key.
4 Collapsible canvas buckets.
4 Fire hook (preventor) with cutting edge.
1 C.T. Co extinguisher one litre capacity.
1 Thirty metres length ofl 25 mm manila rope.
1 Nine metres extension ladder (where necessary).
1 Heavy axe.
1 Spade.
1 Pick, axe.
1 Crowbar.
1 Saw.
1 Hurricane lamp.
1 Electric torch.
1 Pair rubber gloves.

B. For large trailer Pump (1,800 litres /min) -

Nine metres length of armoures suction hose, with wrenches. 1 Metal strainer.
1 Basket strainer.
1 Three way suction collecting head.
1 Suction adaptor.
14 Twenty-five metres length of unlined canvas 75 mm. delivery horses complete with quick-release coupeings.
1 Dividing breech-piece.
1 Collecting breaching-piece.
4 Branch pipes with one 25 mm, two 20 mm and one diffuser nozzles.
2 Standpipe with blank caps.
2 Hydrant keys.
6 Collapsible canvas buckets.
1 Ceiling hook (preventor) with cutting edge.
1 C.T.C. extinguisher one litre capacity.
1 Thirty metres length of 50 mm. manila rope.
1 Mine metres extension ladder (where necessary) 1
Pair rubber gloves.

1 Heavy ake.
1 Spade.
1 Pick-axe.
1 Crowbar.
1 Saw.
1 Hurricane lamp.
1 Electric, torch.

Notes:- If it appears to the Chief Inspector of Factories that in any factory the provisions of breathing apparatus is necessary, he may by order in writing require the occupier to provide suitable breathing apparatus in additing to the equipment for light trailer pump or large trailer pump, as the case may be.

Rule 83. Ladders.-

The ladder should be suitable for the job, of adequate length and of sound construction. Ladder should be provided with nonskid device at both ends. The ladder should be firmly secured at top and should have at least 1 metre extension above the platform or working point. When used, there should be not less than 750 angle of the vertical rise and the base.

Rule 84. Protection of workers attending to prime movers.-

1.In every factory the work of oiling or attending to prime movers shall be done only by a specially trained adult male worker authorized to do such work whose name has been recorded in a register separately maintained for the purpose.

2.Every such worker while oiling or attending to prime mover shall wear tight- fitting clothing.

3.A worker required to wear tight-fitting clothing under sub rule(2) shall be provided by the occupier with clothing which shall consist of at least a pair of closely fitting shorts and a closely fitting half-sleeve shirt or vest. Such clothing shall be returned to the occupier on termination of service or when new clothing is provided.

Rule 85. Polymerizing or Curing Machine. -

1.The following precautions shall be taken when fabrics are processed in polymerizing or curing machine for fixing prints by the Emulsion Technique namely:-

i)Printed fabrics shall be thoroughly dried by passing them over drying cans or through a hot fuel or other equally effective means, before the same are allowed to pass through the polymerizing machine.

ii)The exhaust flap or damper shall be provided with a hole or opening so that at least two-third of it is always open.

iii)Infra-red ray heaters of the machines shall be cut off while running the prints.

iv)The electrical heater shall be connected to a separate circuit and shall be provided with an isolation switch so as to ensure that it is completely cut of in an emergency.

v)The drive of the exhaust fan shall be interlocked with the main drive of the machine in such a way that if the exhaust motor stops, the machine including all heating devices, shall also stop.

vi)The electrical heaters shall have thermostat to regulate the temperature, so that the heaters shall be automatically cut off if the temperature rises above the pre-set value.

vii)Adequate flap shall be provided on top of the machine, which can open and let off the fumes in the case of an explosion.

viii) Filter guaze shall be cleaned at least once a week.

ix)Exhaust duct shall be clean at least once a week.

x)Tension of the V belt drive of the fans shall be checked every week.

2.The machine shall be examined, under the direct supervision of a responsible person designated by the occupier or manager, who by his experience and knowledge of necessary precautions against risk of explosion, is fit to supervise such work.

3.A register shall be maintained in which the details of various checks carried under sub-rule (2) shall be entered and every entry made therein shall be signed by the person making the checks.

Rule 86. Safety Measure in Factories where Equipments of Pipelines Containing Inflammable Materials are Operated. -

I)The system of work-permits shall be introduced and unless the equipment or the pipeline is certified to be free of inflammable gas or liquid, no person shall be allowed to enter or open the same.

II)The work of opening such equipment or pipe line shall not be commenced unless the following operations are carried out and checked by the Supervisor in-charge of the Process Department of the Factory:-

i)Blanking operation.- The equipment or pipeline to be opened for repairs or maintenance shall be effectively blanked so as to ensure that no inflammable gas or liquid can enter the same under any circumstances during the operation or repairs or maintenance. The Supervisor of the process Department shall check personally these operations and shall certify accordingly.

ii)Flushing operation.- The Supervisor of the Process Department shall carry out the steaming or flushing out with water of the equipment or pipeline to ensure that all inflammable material is removed from the equipment or pipeline and shall certify to that effect.

III) i) Opening of the equipment.- The Supervisor of the Engineering Department of the factory in-charge of the work of opening of such equipment of pipeline, or getting clearance from the Supervisor in charge of the Process Department, shall satisfy himself that the above operations are complete and shall sign the work permits issued by the Supervisor of the process Department.

ii)It shall be the joint responsibility of the Supervisor of the Process Department and the Supervisor of the Engineering Department to check and ensure that hot lines, if any, in ;the vicinity of such works are properly screenced, in accordance with the safety instructions of the factory management. The work permit shall have as specific entry for this operation which shall be signed by both the Supervisors.

IV) No part of the running equipment or pipeline shall be opened unless a gas test is conducted by a responsible person to ensure that the equipment or pipeline is safe for opening.

V)No workers whose clothes have been contaminated with inflammable material shall be allowed to work where any such running equipment or pipeline is being opened.

VI) The Safety Officer or any officer authorized by him, shall have system of random checking on the work permits issued and he shall report any serious deficiencies to the Works Manager directly.

VII) All drains of such equipments or pipeline shall be laid into the drains to prevent any splashing of the draining inflammable liquids or gases.

VIII) Before commencing the opening operation, it shall be ensured that a specific person trained in fire-fighting operations is kept available and his presence shall be ensured throughout the operation of the opening of the equipment.

Rule 87. Safety Measure in Gas Works. -

In respect of any factory where inflammable gas is produced by carbonization of a coal, oil or any other similar substance, the following provisions shall be complied with, namely:-

i)No pipe, valve or any cover of any equipment into which gas is normally allowed to flow shall be opened unless it is ensured that the equipment is no more supplied with any inflammable or explosive gas at a pressure greater than atmospheric pressure.

ii)Before undertaking repairs of every sort to any pipe, valve or any other equipment connected with any part in the plant or machinery of any gas works (not being a gas-holder) it shall be ensured that the gas under pressure does not reach the point where such pipe, valve or equipment is being opened by the removal of any bolts and nuts or by cutting either by mechanical means or by application of heat and that such pipe, valve or equipment is so isolated from the gas-holder or any other equipment generating gas that no gas under the pressure reaches the point of repair.

iii)Before loosening the bolts and nuts or before undertaking the cutting or any pipe, valve or equipment in any gas works, a definite test shall be carried out by a competent person that no gas under pressure is fed to the point of repair. Details of the test carried out shall be mentioned in a certificate which shall be signed by the competent person. A copy of such certificate shall be displayed prominently near the plane of repair and shall be made available on demand to every worker employed in connection with such repairs for his perusal.

iv)Every worker employed in connection with such repairs and working near any pope, valve or other equipment while it is being opened shall be supplied with a mask and a respirator fed by air fresh from a point away from the point of repair.
It shall be ensured that the worker shall wear the respirator while working near the point of repair.

v)Electrical wiring, or any electrical equipment (not being electrical or welding equipment) used near the point of repair shall be so arranged that there are no trailing cables along the floor. All electrical equipment shall be of flame-proof type:
Provided that the provisions of this rule shall not apply to mains and services, plant or machinery installed in the open air subject to the following conditions:

a)The main or service shall be situated in the open air, and it shall contain only the following gases, separately or mixed at a pressure greater than atmospheric pressure, namely, town gas, coke oven gas , producer gas, blast furnace gas or gases other than air, used in their manufacture;

b)The main or service shall not contain acetylene or any gas or mixture of gases to which acetylene has been intentionally added,;

c)The operation shall be carried out by an experienced person or persons and at least two persons (including those carrying out the operations) experienced in work on gas mains and over 18 years of age shall be present during the operation;

d)The site of the operation shall be free from any inflammable or explosive gas or vapour;

e)Where acetylene gas is used as a source of heat in connection with an operation, it shall be compressed and contained in a porous substance in a

cylinder; and

f)Prior to the application of any flame to the gas main or service, this shall be pierced or drilled and the escaping gas ignited.

Explanation –

1)It shall not be considered effective measure to stop the gas under pressure from reaching the point of repair if only an inflated bladder causes the obstruction between the source of gas under pressure and the point of repair;

Provided that where gas valves cannot be provided, it shall be considered an effective measure to stop the gas pressure from reaching the point of repairs if inflated bags alone are inserted against gas pressure not in excess of those indicated below:-

Diameter of gas main	**Pressure in inches of water guage**
Upto and including 4	10
5 to 10	8
11 to 17	6
18 to 24	5
over 24	3

and a competent person is kept constantly during the operation to watch and control the pressures within the limits specified as above and that -

Such bags must be tested on site for soundness and at least two spare bags are available onsite.

2) The competent person for the purpose of this rule shall be the Chief Engineer of the factory or a person certified by the Chief Engineer in writing to be the competent person.

Rule 88. Fragile Roofs-provision of Crawling Boards etc. -

In any factory, no person shall be required to stand or pass over or work on or near any roof or ceiling covered with fragile material like A.C. sheets or similar material through which he is liable to fall in case it breaks or gives way, a distance of more than three metres unless-

a)suitable and sufficient ladders, duck ladders or crawling boards, which shall be securely supported, are provided and used; and

b)a permit to work on the fragile roof is issued to him each time he is required to work thereon by a responsible person of the factory concerned.

Explanation.- Fragile material means sheets made of asbestos cement or made from similar materials such as Perspex, polyester or other types of plastic fibres.

Rule 89. Special Safety Precautions for Certain Highly Hazardous Chemical Process.-

In respect of any factory engaged in carrying out any hazardous chemical processes or such parts of any processes as are specified in the Schedule annexed hereto the following provisions shall be complied with viz.-

1)Process Hazards.-

a)Before commencing any large scale experimental works or any new manufacture, all possible steps shall be taken to ascertain definitely all the hazards involved both from the actual operations and also from the point of view of the chemical reactions. The properties of the raw materials used, the final products to be made and any by products arising during manufacture shall be carefully studied and adequate and suitable provisions shall be made in advance for dealing with any hazards including effects on workers which may be inherent in the process or which may arise during the process of manufacture.

b)The plant, machinery or equipment concerned with the hazardous process shall be in-charge of such operators only who have been trained and made thoroughly conversant to be fit persons to be incharge thereof and no other persons shall be allowed to operate the plant, machinery or equipment. The operators shall be regular employees of the occupier and shall in no case be persons who are employed as contract workers.

c)The work of the operators shall be supervised on an overall basis by at least one competent person, who for the purpose of this sub rule shall at least be a graduate in Chemical Engineering of Chemical Technology with specialized knowledge in respect of the processes given in the schedule; Provided that the Chief Inspector may accept a graduate in chemistry having adequate knowledge of the processes given in the schedule and also adequate experience and training or any other qualifications, if in his opinion they are equivalent to the qualifications aforesaid.

2)Emergency Instructions.- Simple and special instructions shall be framed to ensure that effective measures will be carried out in cases of emergency, to deal with possible escapes of inflammable explosive, toxic or deleterious gases, vapours, liquid or dusts. These instructions shall be in the language understood by the majority of the workers and shall be displayed in bold letters at prominent places in the different sections concerned. All concerned workers shall be suitably trained and fully instructed in the prompt action to be taken in such emergencies and also in the general hazards encountered in this process.

3)Fire and Explosion Risks. - In any part of the factory where there is a danger due to fire or explosion from inflammable gas, vapour or dust.

i)No internal combustion engine and no electric motor or other electrical equipment or instrument capable of generating sparks or otherwise causing combustion shall be installed or used in a building engaged in the processes. All electrical fitting shall be of suitable flame-proof construction.

ii)All pipes carrying hot exhaust or chemicals shall be installed outside the plant building and where this is not possible, these pipes including the flanged portion shall be effectively lagged.

iii)Where an inflammable atmosphere is likely to occur the soles of footwear worn by workers shall have no metal on them and the wheels of trucks or conveyors shall be constructed of non-sparking materials. Adequate precautions shall be taken to prevent the ignition of explosive or inflammable atmosphere by sparks emitted from locomotives or other vehicles operating in the vicinity.

iv)Portable electric hand lamps shall not be used unless of an intrinsically safe type and all portable electric tools and appliances connected by flexible wires shall not be used, unless these are of suitable flame-proof construction.

v)No electric arc lamp, no naked light fixed or portable, shall be used and no person shall have in his possession any match or any apparatus of any type for producing a naked light or spark and all incandescent electric lights shall be in double airtight covers.

vi)Prominent notices in the language understood by the majority of the workers and legible by day and by night, prohibiting smoking, the use of naked lights and the carrying of matches or any apparatus for producing a naked light or spark shall be affixed at the entrance of every room or place where there is the risk of fire or explosion from inflammable liquid gas, vapour or dust. In the case of illiterate workers, the contents of the notices shall be fully and carefully

explained to them when they commence work in the factory for the first time and again when they have completed one week of services.

vii)A sufficient supply of spades, scrapers and pails made from suitable non-sparking material shall be provided for the use of persons employed in cleaning out and or removing residues from any chamber, still, tank or other vessels where any inflammable or explosive danger may occur.

viii)All machinery and plant, particularly pipe lines, belt drives, stirrer on which static electricity is likely to accumulate shall be effectively earthed. Receptacles for inflammable liquids shall have metallic connections to earthen supply tanks to prevent sparking due to static charge built up.

d)Additional Special Precautions.

i)The heating of the process, if required, shall not be carried out by immersion or other types of heaters deriving energy from electricity.

ii)The steam heating coils placed in the lower part of the vessel shall never be kept uncovered or allowed to be heated dry. A substantial amount of the liquid shall be ensured in the vessel after each operation to ensure this; Provided that in case employing out of vessels filled with high melting products, the steam shall be stopped/disconnected to the heating coils, before draining process is started to ensure that the heating coils are free of steam before they are uncovered.

iii)Steam shall be supplied through a pressure reducing valve and a safety valve correctly set to ensure that the critical temperature of the process is not exceeded.

iv)A suitable rapture disc shall be provided on the vessel in addition to the usual spring loaded safety valve. The pipe duct leading away from the rupture dise shall be taken out of the work-room shall be straight and without any bends in order to minimize resistance at the time of blowing and to avoid any chance of a secondary vapour/air explosion.

v)The vent line of the vessel shall carry a flame arrestor.

vi)Breaking of vacuum, if the process is done under vacuum, on account of consideration of special hazards inherent in the process, shall be done only with nitrogen, other suitable inert gas or steam. Compressed air connection to the manifolds of the vessel equipment shall be avoided.

vii)There shall be an automatic cut-off device of steam supply or other heating devices as well as of further feed to the vessel set to operate, no sooner the critical temperature is reached, beyond which the reaction, if any, in the vessels is likely to get out of control or reach run-away state.

viii)There shall be arrangement such that it would be possible to introduce quickly, preferably chilled water or atleast ordinary cool water circulation in the steam or other heating coils, no sooner the heating element is cut-off or separate coils or jackets for this purpose shall be ;provided for the vessel.

ix)An alarm system shall be provided linked to the pressure indicator of the vessel, so that automatically an audible warning will be given as soon as the pressure exceeds the present safe limit.

x)There shall be provided at automatic arrangements such that if the mechanical agitation, where so provided, fails on account of failure of motive power or due to broken shaft, broken blades, failing of blades or such other contingencies, the supply of steam or other heating devices as well as further feed of material would stop automatically.

5)Exemptions - If the Chief Inspector is satisfied in respect of any factory or any process that owing to the special conditions or special methods of work adopted or by reason of the infrequency of the process or for other reasons, all or any of the requirement of this rule are not necessary for the protection of persons employed in any factory or any process, he may by order in writing (which he may in his discretion revoke at any time) exempt such factory or such process from all or any of the provisions of this rule, subject to such condition as he may by such order prescribe and he may, in his discretion add, substract or modify each conditions as deemed fit by him at any time.

SCHEDULE

1)Nitro or Amino processes meaning the manufacture of nitro or amino derivative of Phenol Toluene and of Benzene or its Comologus and the making of explosives with the aid of any of these substances.

2)Halogenation process meaning the addition or substitution reaction with a wide variety of :

a) Chlorination agents and systems such as Chlorine gas, Hydrochloric Acid, Sodium/hypochlorite, Phosgene, Thionyl Chloride (Soc 12) Phosphorus and such others.

b)Fluorination agents such as fluorine.

c)Bromination agents such as a Bromine.

d)Iodination agents such as iodine, in liquid or gas phases.

3)Aromatization and Isomerization process.

Rule 90. Planting of Trees.

In every factory wherein more than one hundred workers are ordinary employed, the occupier of a factory shall plant and maintain trees within the precints of the factory after the approval of the number, type and layout of trees by the District Forest Officer concerned or any qualified horticulturist.

Rule 91. Hand Protection.

Adequate protection for the hands shall be available for all workers when using cutting or welding apparatus to which oxygen or any flammable gas or vapour is supplied at a pressure greater than atmospheric pressure or when engaged in machine reveting or in transporting or stacking plates or in handling plates at machines.

Rule 92. Head Protection.-

When workers are employed in areas where there is danger of falling objects they shall be provided with suitable safety helmets.

Rule 92 A. Protective equipment.

The Inspector may, having regard to the nature of the hazards involved in work and process carried out, order the Occupier or the Manager in writing to supply to the workers exposed to particular hazard any personal protective equipment as may be found necessary.

Rule 93. Provision of Safety Belts and Life-lines.

i)Whenever any worker is engaged on work at a place from which he is liable to fail through a distance of more than 2 (two)meters he shall be provided with safety belts equipped with lifelines which are secured with a minimum of slack, to a fixed structure unless any other effective means such as provision of guard rails or ropes are taken to prevent his falling.

ii)All safety belts and lifelines shall be examined once in six months by a competent person to ensure that no belt or lifeline which is not in good condition is used and entered in a register which shall be produced before the inspector on demand.

Rule 94. Ovens and Driers.

1)Application. - This rule shall apply to ovens and driors, except those used in laboratories or kitchens of any establishment and those which have a capacity below 325 litres.

2)Definition. - For the purpose of this Rule, oven or drier means any enclosed structure receptacle, compartment or box which is used for baking, drying or otherwise

processing of any article or substance at a temperature higher than the ambient temperature of the air in the room or space in which the oven or drier is situated, and in which a flammable of explosive mixture of air and a flammable substance is likely to be evolved within the enclosed structure, receptacle, compartment or box or part thereof on account of the article or substance which is baked, dried or otherwise processed within it.

3)Separate electrical connection.- Electrical power supplied to every oven or drier shall be by means of a separate circuit provided with an isolation switch.

4)Design, construction, examination and testing.-

a)Every oven or drier shall be properly designed on sound engineering practice and be of good construction, sound materials and adequate strength, free from any patent defects and safe if properly used.

b)No oven or drier shall be taken into use in a factory for the first time unless a competent person has thoroughly examined all its parts and carried out the tests as are required to establish that the necessary safe systems and controls provided for safety in operation for the processes for which it is to be used and a certificate of such examination and tests signed by that competent person has been obtained and is kept available for inspection.

c)All parts of an oven or drier which has undergone any alteration or repair which has the effect of modifying any of the design characteristics, shall not be used unless a thorough examination and tests as have been mentioned in clause (b) has been carried out by a competent person and a certificate of such examination and tests signed by that competent person has been obtained and is kept available for inspection.

5)**Safety Ventilation**-

a)Every oven or drier shall be provided with a positive and effective safety ventilation system using one or more motor-driven centrifugal fans so as to dilute any mixture of air and any flammable substance that may be formed within the oven or drier and maintain the concentration of the flammable substance in air at a safe level of dilution.

b)The safe level of dilution referred to in clause (a) shall be so as to achieve a concentration of the concerned flammable substance in air of not more than 25 percent of its lower explosive limit.

Provided that a level of concentration in air upto 50 percent of the lower explosive limit of the concerned flammable substance may be permitted to exist subject to installation and maintenance of an automatic device which-

i)shows continuously the concentration of the flammable substances in air present in the oven or drier at any instant;

ii)sounds an alarm when the concentration of the flammable substance in air in any part of the oven or drier reaches a level of 50 percent of its lower explosive limit; and

iii)shuts down the heating system of the oven or drier automatically when the concentration in air of the flammable substance in any part of the oven or drier reaches a level of 60 percent of its lower explosive limit, is provided to the oven or drier and maintained in efficient working condition.

c)No oven or drier shall be operated without its safety ventilation system working in an efficient manner.

d)No oven or drier shall be operated with a level of dilution less than what is referred to in clause (b).

e)Exhaust ducts of safety ventilation systems should be so designed and placed that their ducts discharge the mixture of air and flammable substance away from the workrooms and not near windows or doors or other openings from where the mixture could re-enter the workrooms.

f)The fresh air admitted into the oven or drier by means of the safety ventilation system shall be circulated adequately by means of circulating fan or fans through all parts of the oven or drier so as to ensure that there are no locations where the flammable substance can accumulate in the air or become pocketed to any dangerous degree.

g)Throttling dampers in any safety ventilation system should be so designed by cutting away a portion of the damper or otherwise, that the system will handle atleast the minimum ventilation rate required for safety when they are set in their maximum throttling position.

6)Explosion panels.-

a)Every oven or drier having an internal total space of not less than half cubic metre shall be provided with suitably designed explosion panels so as to allow release of the pressure of any possible explosion within the oven of drier through explosion vents.

The area of openings to be provided by means of such vents together with the area of openings of any access doors which are provided with suitable arrangements for their release in case of an explosion, shall be not less than 2200 square centimeter for every one cubic metre of volume of the oven or drier. The design of the explosion panels and doors as above said shall be such as to secure their complete release under an internal pressure of 0.25 kg per square centimeter.

b)The explosion releasing panels, shall, as far as practicable, be situated at the roof of the oven or drier or at those portions of the walls where persons do not remain in connection with operation of the oven or drier.

7)Interlocking arrangements.-

a)In each oven or drier efficient inter-locking arrangement shall be provided and maintained to ensure that-

i)all ventilating fans and circulating fans whose failures would adversely effect the ventilation rate of flow pattern, are in operation before any mechanical conveyor that may be provided for feeding the articles or substances to be processed in the oven or drier is put into operation;

ii)failure of any of the ventilating or circulating fans will automatically stop any conveyor as referred to in clause(i) as may be provided, as well as stop the fuel supply by closing the shut off valve and shut off the ignition in the case of gas or oil fired ovens, and in the case of electrically heated ovens switch off the electrical supply to the heaters;

iii)the above said mechanical conveyor is set in operation before the above said shut off valve can be energized; and

iv)the failure of the above said conveyor will automatically close the above said shut off valve in the case of ovens and driers heated by

gas, oil or steam and deactivate the ignition system, or cut off the electrical heaters in the case of electrically heated ovens or furnaces.

8)Automatic preventilation. Every oven or drier heated by oil, gas, steam or electricity shall be provided with an efficient aggangement for automatic preventilation consisting of atleast 3 volume changes with fresh air by operation of safety ventilation fans and the circulating fans (if used) so as to effect purging of the oven or drier of any mixture of air and a flammable substance before the heating system can be activated and before the conveyor can be placed in position.

9)Temperature control.- Every oven or drier shall be provided with an automatic arrangement to ensure that the temperature within does not exceed a safe upper present limit to be decided in respect of the particular processing being carried on.

10)Multistage processes.- Wherever materials are to be processed in ovens or driers in successive operations, suitable arrangement should be provided to ensure that the operating temperature necessary for safe operation at each stage are maintained within the design limits.

11)Combustible substances not to drip on electrical heaters or burners flame.-Effective arrangements shall be provided in every oven or drier to prevent dripping of combustible substances on electric heaters or burner flame used for heating.

12)Periodical examination, testing and maintenance.-

a)All parts of every oven and drier shall be properly maintained and thoroughly examined and the various controls as mentioned in this rule and the working of the oven or drier tested at frequent intervals to ensure its safe operation by a responsible person designated by the occupier or manager, who by his experience and knowledge of necessary precautions against risks of explosion, is fit to undertake such work.

b)A register shall be maintained in which the details of the various tests carried out from time to time under clause (a) shall be entered and every entry made shall be signed by the person making the tests.

13)Training of operators. No person shall be assigned any task connected with operation of any oven or drier unless he has completed 18 years of age and he is properly trained.

14)Polymerising machine.-

a)Printed fabric shall be thoroughly dried by passing them oven drying cans or through hot flue or other equally effective means, before the same is allowed to pass through polymerising machines.

b)Infrared ray heators of polymerizing machines shall be cut off while running the prints.

Rule 95. Reaction vessels and kettles.-

1)This rule applies to reaction vessels and kettles, hereinafter referred to as reaction vessels, which normally work at a pressure not above the atmospheric pressure but in which there is likelihood of pressure being created above the atmospheric pressure due to reaction getting out of contral or any other circumstances.

2)In the event of the vessel being heated by electrical means, a suitable thermostatic control device shall be provided to prevent the temperature exceeding the safe limit.

3)Where steam is used for heating purposes in a reaction vessel, it shall be supplied through a suitable pressure reducing valve or any other suitable automatic device to prevent the maximum permissible steam pressure being exceeded, unless the pressure of the steam in the supply line itself cannot exceed the said maximum permissible pressure.

4)A suitable safety valve or rupture disc of adequate size and capacity shall be provided to effectively prevent the pressure being built up in the reaction vessel beyond the safe limit. Effective arrangements shall be made to ensure that the released gases, fumes, vapours, liquids, or dusts, as the case may be, are led away and disposed of through suitable pipes without causing any hazard. Where flammable gases or vapours are likely to be vented out from the vessel, the discharge end shall be provided with a flame arrestor.

5)Every reaction vessel shall be provided with a pressure gauge having the appropriate range.

6)In addition to the devices as mentioned in the foregoing provisions, means shall be provided for automatically stopping the feed into the vessel as soon as process conditions deviate from the normal limits to an extent which can be considered as dangerous.

1 Wherever necessary, an effective system for cooling, flooding or blanketing shall be provided, for the purpose of controlling the reaction and process conditions within the safe limits of temperature and pressure.

2 An automatic auditory and visual warning device shall be provided for clear warning whenever process conditions exceed the present limits. This device, wherever possible, shall be integrated with automatic process correction systems. 3 A notice pointing out the possible circumstances in which pressures above atmospheric pressure may be built up in the reaction, the dangers involved and the precautions to be taken by the operators shall be displayed at a conspicuous place near the vessel.

Rule 96. Examination of eye sight of certain workers.-

1)No person shall be employed to operate a crane, locomative or forklift truck, or to give signals to a crane or locomotive operator unless his eye sight and colour vision have been examined and declared fit by a qualified ophthalmologist to work whether with or without the use of corrective glasses.

2)The eye sight and colour vision of the person employed as reffered to in clause (1) shall be examined at least once in every period of 12 months upto the age of 45 years and once in every 6 months beyond that age.

3)Any free payable for an examination of a person under this sub-rule shall be paid by the occupier and shall not be recoverable from that person.

4)The record of examination or re-examination carried out as required under sub- rule (1) shall be maintained in

Form 18.

Rule 97. Railways in factories.

1)This shall apply to railways in the precints of a factory which are not subject to Indian Railways Act. 1890 (Central Act IX of 1890).

2)Gateways.- A Gateway through which a railway track passes shall not be used for the general passage of workers into or out of a factory.

3)Barriers and turngates.-

a)Where building or walls contain doors or gates which open to a railway track, a barrier about 1 metre high shall be fixed parallel to and about 60 cm. away from the building or wall outside the opening and extending several feet beyond it at either end, so that any person passing out may become aware of an approaching train when his pace is checked at the barrier.

If the traffic of the nearest track is all in one direction, the barrier shall be in the form of a 'L' with the end of the short leg abutting on to the wall and the other end opening towards the approaching train.

b)If the distance between wall and track cannot be made to accommodate such a barrier, the barrier or a turngate shall be placed at the inside of the opening.

c)Where a footway passes close to a building or other obstruction as it approaches a railway track, a barrier or a turngate shall be fixed in such a manner that a person approaching the track is compelled to move away from the building or obstruction and thus obtain timely sight of an approaching locomotive or wagon.

4)Crowd.-

a)Workers pay-window, first-aid stations and other points where a crowd may collect shall not be placed near a railway track.

b)At any time of the day when workers are starting or ending work, all railways traffic shall cease for not less than five minutes.

5)Locomotives.-

a)No locomotives shall be used in shunting operations unless it is in good working order.

b)Every locomotive and tender shall be provided with efficient brakes, all of which shall be maintained in good working order. Brake shoes shall be examined at suitably fixed interval and those that are worn out replaced at once.

c)Water-gauge glasses of every locomotive, whatever its boiler pressure, shall be protected with substantial glass or metal screens.

d)Suitable steps and hand-holds shall be provided at the corners of the locomotive for the use of shunters.

e)Every locomotive crane shall be provided with lifting and jacking pads at the four corners of the locomotive for assisting in re-railing operations.

f)It shall be clearly indicated on every locomotive crane in English and in language understood by the majority of the workers in the factory, for what weight of load and at what radius the crane is safe.

6)Wagons.-

a)Every wagon (and passenger coach, if any) shall be provided either with self-acting brakes capable of being applied continuously or with efficient hand brakes which shall be maintained, in good working order. The hand brakes shall be capable of being applied by a person on the ground and fitted with a device for retaining them in the applied position.

b)No wagon shall be kept standing within 3 metres of any authorized crossing.

c)No wagon shall be moved with the help of crow bars or pinch bars.

7)Riding on locomotive, wagon or other rolling stock.- No person shall be permitted to be upon (whether inside or outside) any locomotive wagon or other rolling stock except where secure foot hold and hand hold are provided.

8)Attention to brakes and doors.-

a)No locomotive, wagon or other rolling stock shall be kept standing unless its brakes are firmly applied and, where it is on a gradient, without sufficient number of properly constructed scotches placed firmly in position.

b)No train shall be set in motion until shunting jamadar has satisfied himself that all wagon doors are securely fastened.

9)Projecting loads and cranes.-

a)If the load on a wagon projects beyond its length, a guard or dumm-truck shall be used beneath the projection.

b)No locu-crane shall travel without load unless the jib is completely lowered and positioned in line with the track.

c)When it is necessary for a loco-crane to travel with a load, the jib shall not be swung until the loco-crane has come to rest.

10)Loose shunting.- Loose shunting shall be permitted only when it cannot be avoided. It shall never be performed on a wagon not accompanied by a man capable of applying and pinning down the brakes. A wagon not provided with brakes in good working order and capable of being easily pinned down shall not be loose shunted, unless there is attached to it at least another wagon with such brakes. Loose shunting shall not be performed with, or against a wagon containing passengers, live-stock or explosives.

11)Fly-shunting.- Fly shunting shall not be permitted on any factory railway.

12)The shunting jamader.-

a)Every locomotive or wagon in motion in a factory shall be in charge of a properly trained jamadar.

b)Before authorizing a locomotive or wagons to be moved, the shunting jamadar shall satisfy himself that no person is under or in between or in front of the locomotive or wagons.

13)Hand signals.- The hand signals used by the shunting jamadar by day and night shall be those prescribed by the shunting rules of railways, working under the Indian Railways Act, 1890(Central Act IX of 1890).

14)Night work and for.-

a)In factories where persons work at night, no movement of locomotive, wagon or other rolling stock otherwise than by hand shall be permitted between sunset and sunrise unless the tracks and their vicinity are lighted on a scale of not less than 10 lux as measured at the horizontal plane at the ground level.

b)In no circumstances shall any locomotive or train be moved between sunset and sunrise or at any time when there is fog, unless it carries a white head light and a red rear light.

15)Speed control.-

a)A locomotive or train shall not be permitted to move at a speed greater than seven kilometers per hour.

b)A train, locomotive, wagon or other rolling stock shall not be moved by mechanical or electrical power unless it is preceded at a distance of not less than 10 metres during the whole of its journey by a shunting jamadar.
He shall be provided with signaling flags of lamp and whistle necessary for calling the attention of the driver.

16)Tracks.-

a)The distance (i) between tracks and (ii) between tracks and building, blind walls or other structures and (iii) tracks and materials deposited on the ground shall be respectively not less than:-

aa)from centre to centre of parallel tracks, the overall width of the widest wagon of that guage plus twice the width of the door of such a wagon when opened directly outwards plus 1 metre.

bb)from a building or structure other than loading platform to the centre of the nearest track, half the overall width of the widest wagon of that gauge, plus the width of its door when opened outwards plus 1.5 metres.

cc)from material stocked or deposited alongside the track, on the ground or on a loading platforms, to the centre of the nearest track, half the overall width of the widest wagon of that gauge, plus half the width of its door when opened directly outward, plus 1 metre.

b)Sleepers of a track shall be in level with ground and at all crossings of the track width a road or walkway, the surface of the road or walkway shall be in level with the top of the rails.

c)All track ends shall be equipped with buffer stops of adequate strength.

d)Barriers of substantial construction shall be securely and permanently fixed across any doorway or gateway in a building or in a wall which conceals an approaching train from view, between the building and the track as prescribed in clause (a) of sub-rule (3).

e)Where tracks are carried on a gantry, or other elevation, a safe footway or footways with hand rails and toeboards shall be provided at all positions where persons work or pass on foot; and where there is an opening in the stage of an elevated track for dropping of material to a lower level, the position shall be adequately fenced or the opening itself provided with a grill through which a person cannot fall.

f)All point leverds shall have their movements parralled to, not across, the direction of the track.

g)All loading platforms which are more than 60 c.m. above the level of the ground on which the track is laid and more than 15 metres in length shall be provided with steps at intervals not greater than 15 metres apart to enable the platform to be easily mounted from the track.

h)Turn tables on plant railways shall be provided with locking devices which will prevent the tables from turning while locomotives or wagons are being run on or off the tables.

i)Workers shall be prohibited from passing under, between or above railway wagons.

17)Crossings.-

a)At all crossings of a track with a road or walkway, danger or crossing signs and wherever reasonably practicable, blinking lights or alarm lights shall be provided. At all important crossings, gates or barriers manned by watchman shall

be provided. Swinging gates and barriers shall be secured against inadvertent opening or closing.

b)All crossing, warning, signs, gates and barriers shall be illuminated during hours of darkness.

18)Duties of drivers and shunters.- It shall be the duty of every driver of a locomotive or a shunter including a shunting jamadar, to report without delay to their superior any defect in permanent way locomotive or rolling stock.

19)Young persons not to be employed as drivers of locomotive or as shunters.- No person who is under 18 years of age and no person who is not sufficiently competent and reliable shall be employed as a driver of locomotive or as a shunter.

20)The Chief Inspector may by an order in writing exempt a factory or part of it from all or any of the provisions of this rule to such extent and on such conditions as he deems necessary.

Rule 98. Safety Committee.

1)In every factory-

a)Wherein 250 or more workers are ordinarily employed, or

b)Which carries on any process or operation declared to be dangerous under Section 87 of the Act; or

c)Which carries on 'hazardous process' as defined under section 2(cb) of the Act;

There shall be a Safety Committee.

2)The representatives of the management on Safety Committee shall include- a)A senior official, who by his position in the organization can contribute effectively to the functioning of the Committee, shall be the Chairman; b)A Safety Officer and a Factory Medical Officer wherever available and the Safety Officer in such a case shall be the Secretary of the Committee;

c)A representative each from the production, maintenance and purchase departments.

3)The workers representatives on this Committee shall be elected by the workers.

4)The tenure of the Committee shall be two years.

5)Safety Committee shall meet as often as necessary but at least once in every quarter. The minutes of the meeting shall be recorded and produced to the Inspector on demand.

6)Safety Committee shall have not right to be adequately and suitably informed of-

a)potential safety and health hazards to which the workers may be exposed at work-place;

b)data on accidents as well as data resulting from surveillance of the working environment and of the health of workers exposed to hazardous substances so far as the factory is concerned, provided that the committee undertakes to use data on a confidential basis and solely to provide guidance and advice on measures to improve the working environment and the health and safety of the workers.

7)Function and duties of the Safety Committee shall include-

a)assisting and cooperating with the management in achieving the aims and objectives outlined in the 'Health and Safety Policy' of the occupier;

b)dealing with all matters concerning health, safety and environment and to arrive at practicable solutions to problems encountered;

c)creating safety awareness amongst all workers;

d)undertaking educational, training and promotional activities.

e)discussing reports on safety, environmental and occupational health surveys, safety audits, risk assessment, emergency and disaster management plans and implementation of the recommendations made in the reports;

f)carrying out health and safety surveys and identifying causes of accidents;

g)looking into any complaint made on the likelihood of an imminent danger to the safety and health of the and workers and suggesting corrective measures; and

h)reviewing the implementation of the recommendations made by it.

8)Where owing to the size of the factory, or any other reason, the functions referred to in sub-rule (7) cannot be effectively carried out by the Safety Committee, it may establish sub-committee as may be required to assist it.

Rule 99. Site Appraisal Committee

(Rules prescribed under sec 4A sub-section (i) read with sec 112)

1)constitution: The following provisions shall govern the functioning of the Site Appraisal Committee, herein-after, be referred to as the "Committee", in these rules:-

a)The State Government may constitute a Site Appraisal Committee and reconstitute the Committee as and when necessary;

b)The State Government may appoint a senior official of the Factories Inspectorate to be the Secretary of the Committee;

c)The State Government may appoint the following as members of the committee:-

i)a representative of the Fire Service Organization of the State Government;

ii)A representative of the State Department of Industries;

iii)A representative of the Director General of Factory Advice Service and Labour Institutes, Bombay.

2)No member, unless required to do so by a Court of Law, shall disclose otherwise than in connection with the purpose of the Act, at any time any information relating to manufacturing or commercial business or any working process which may come to his knowledge during his tenure as a Member of this Committee. 3)Application for appraisal of sites.

a)Application for appraisal of sites in respect of the factories covered under section 2(cb) of the Act shall be submitted to the Chairman of the Site Appraisal Committee.

b)The application for site appraisal alongwith 15 copies thereof shall be submitted in the

Form 18A. The committee may dispense with furnishing information on any particular item in the Application Form 18A if it considers the same to be not relevant to the application under consideration.

4)Function of the Committee-

a)The Secretary shall arrange to register the application received for appraisal of site in a separate register and acknowledge the same within a period of 7 days.

b)The Secretary shall fix up meeting in such a manner that all the applications received and registered are referred to the Committee within a period of one month from the date of their receipt.

c)The Committee may adopt a procedure for its working, keeping in view the need for expeditious disposal of applications.

d)The Committee shall examine the application for appraisal of a site with reference to the prohibitions and restrictions on the location of industry and the carrying on of processes and operations in different areas as per the provisions of Rule 5 of the Environment (Protection) Rules, 1986 framed under the Environment (Protection) Act, 1986.

e)The Committee may call for documents, examine experts, inspect the site if necessary and take other steps for formulating its views in regard to the suitability of the site.

f)Where the proposed site requires clearance by the Ministry of Industry or the Ministry of Environment and Forests, the application for Site Appraisal will be considered by the Site Appraisal Committee only after such clearance has been received.

Rule 100. Health and Safety Policy

1) The occupier of every factory, except as provided for in sub-rule (2), shall prepare a written statement of his policy in respect of health and safety of workers at work.

2)All factories-

a)covered under Section 2(m) (i) but employing less than 50 workers;

b)covered under Section 2 (m) (ii) but employing less than 100 workers; are exempted from requirement of sub-rule (1);

Provided that they are not covered under the First Schedule under Section 2 (cb) or carrying out processes or operations declared to be dangerous under Section 87 of the Act.

3)Notwithstanding anything contained in sub-rule (2), the Chief Inspector may require the occupiers of any of the factories or class or description of factories to comply with the requirements of sub rule (1), if, in his opinion, it is expedient to do so.

4)The Health and Safety Policy should contain or deal with;

a)declared intention and commitment of the top management to health, safety and environment and compliance with all the relevant statutory requirements;

b)organizational set-up to carry out the declared policy clearly assigning the responsibility at different levels; and

c)arrangements for making the policy effective.

5)In particular, the Policy should specify the following;

a)arrangements for involving the workers;

b)intention of taking into account the health and safety performance of individuals at different levels while considering their career advancement; c)fixing the responsibility of the contractors, subcontractors transporters and other agencies entering the premises;

d)providing a resume of health and safety performance of the factory in its Annual Report;

e)relevant technique and methods, such as safety audits and risk assessment for periodical assessment of the status on health, safety and environment and taking all the remedial measures;

f)stating its intentions to integrate health and safety, in all decisions including those dealing with purchase of plant, equipment, machinery and material as well as selection and placement of personnel;

g)arrangements for informing, educating and training and retraining its own employees at different levels and the public, wherever required.

6)A copy of the declared Health and Safety Policy signed by the occupier shall be made available to the Inspector having jurisdiction over the factory and to the Chief Inspector;

7)The policy shall be made widely known by-

a)making copies available to all workers including contract workers, apprentices, transport workers, suppliers, etc.

b)displaying copies of the policy at conspicuous places; and

c)any other means of communication; in a language understood by majority of workers.

8)The occupier shall revise the Safety Policy as often as may be appropriate, but it shall necessarily be revised under the following circumstances:-

a)whenever any expansion or modification having implications on safety and health of persons at work is made; or

b)whenever new substance(s) or articles are introduced in the manufacturing process having implications on health and safety of persons exposed to such substances.

Rule 101. Collection and Development And Dissemination of Information (Rules made under Sec 41B and 112, Material Safety Data Sheet)

1)The occupier of every factory carrying on a hazardous process shall arrange to obtain or develop information in the form of Material Safety Date Sheet (MSDS) in respect of every hazardous substance or material handled in the manufacture, transportation and storage in the factory. It shall be accessible upon request to a worker for reference.

a)Every such Material Safety Data Sheet shall include the following information:-

i)The identity used on the label;

ii)Hazardous ingredients of the substance;

iii)Physical and chemical characteristics of the hazardous substance;

iv)The physical hazards of the hazardous substance including the potential for fire, explosion and reactivity.

v)The health hazards of the hazardous substance, including the potential for fire, explosion and reactivity;

vi)The primary route(s) of entry;

vii)The permissible limits of exposure prescribed in the Second Schedule under Section 41-F of the Act, and in respect of a Chemical not covered by the said Schedule, any exposure limit used or recommended by the manufacturer, importer or occupier;

viii)Any generally applicable precautions for safe handling and use of the hazardous substance, which are known, including appropriate

hygienic practices, protective measures during repairs and maintenance of contaminated equipment, procedures for clean-up of spills and leaks;

ix) Any generally applicable control measures, such as appropriate engineering controls, work practices, or use of personal protective equipment;

x) Emergency and first aid procedures;

xi) The date of preparation of the Material Safety Data Sheet, or the last change to it; and

xii)The name, address and telephone number of the manufacturer, importer, occupier or other responsible party preparing or distributing and Material Safety Data Sheet, who can provide additional information on the hazardous substance and appropriate emergency procedures, if necessary.

b)The occupier while obtaining or developing a Material Safety Data sheet in respect of a hazardous substance shall ensure that the information recorded accurately reflects the scientific evidence used in making the hazard determination. If he becomes newly aware of any significant information regarding the hazards of a substance, or ways to protect against the hazards, this new information shall be added to the Material Safety Data Sheet as soon as practicable.

Labelling

2) Every container of a hazardous substance shall be clearly labeled or marked to identify;

a)the contents of the container;

b)the name and address of the manufacturer or importer of the hazardous substances;

c)the physical and health hazards; and

d)the recommended personal protective equipment needed to work safely with the hazardous substance.

SCHEDULE

MATERIAL SAFETY DATA SHEET
SAMPLE MODEL
SECTION I : MATERIAL IDENTIFICATION
Material
Name/Identifier

		Supplier's Name	
Street Address		Street Address	
City	State	City	State
Chemical Name Chemical Identity Trade Name and Synonyms		Postal Code Emergency Telephone No	
		Product use	

Section II

HAZARDOUS INGREDIENTS OF MATERIAL

Hazardous Ingredients	Approximate Concentration %	CASor UN Numbers	LD 50 (Specify species and Route)	LC 50 (Specify species and Route)

SECTION III - PHYSICAL DATA FOR MATERIAL

Physical State -Gas - Liquid - Solid	Odour and Appearance,	Odour Threshold (p.p.m.)	Specific Gravity Freezing (oC)	
Vapour Pressure (mm)	Vapour density (Air=1)	Evaporation Rate	Boiling Point (oC)	F
Solubility in Water (20C)	PH	Density (g/ml)	Coefficient of water/oil distribution	

SECTION IV FIRE AND EXPLOSION HAZARD OF MATERIAL

Flammability

_____ yes _____ No. If yes, under what conditions

_____

Means of Extinction

Special Procedure

Flash point (0 C) and	nder Explosion Limit	er Explosion Limit
Method Auto-ignition Temperature90C) Explosion Impact		
	(%by Volume)	(%by Volume)
	TDG Flammability Classification	Hazardous Combustion Products

SECTION V - REACTIVITY DATA

Chemical Stability

----------yes ---------- No If no under what conditions

Incompatibility to other substances

----------yes ---------- No.

If yes, which ones

Reactivity and under what conditions

Hazardous Decomposition Products

Material

Name/Identifier

SECTION VI - TOXICOLOGICAL PROPERTIES OF MATERIAL

Route of Entry

_____ Skin Contact _____ Skin Absorption _____ Eye Contact

_____ inhalation Acute _____ Inhalation Chronic _____ Ingestion

Effect of Acute Exposure to Material

Effect of Chronic Exposure to Material

Exposure Limit(s)	Irritancy of Material
Sensitisation to Material	Carchinogenicity,

Teratogenicity, Mutagenicity

Reproductive Effects,

SECTION VII - PREVENTIVE MEASURES

Personal Protective Equipment

Gloves (Specify)	Respiratory (Specify)	Eyes (Specify)
Footwear (Specify)	Clothing (Specify)	Other (Specify)

Engineering Controls (e.g. ventilation, enclosed process, etc) please Specify.

Leak and Spill Procedures

Waste Disposal

Handling Procedures and Equipment

Storage Requirements

Special Shipping Information

SECTION VIII - FIRST AID MEASURE

Sources used

Additional information

SECTION IX - PREPARATION DATE OF M S D S

Prepared by (Group, Department, etc) (Phone No.) Date

Rule 102. Disclosure Of Information Of Workers

1)The occupier of a factory carrying on a 'hazardous process' shall supply to all workers the following information in relation to handling of hazardous materials or substances in the manufacture, transportation, storage and other processes;

a)Requirements of Sections 41B, 41C and 41H of the Act.

b)A list of 'hazardous process' carried on in the factory;

c)Location and availability of all Material Safety Data Sheets as per Rule 101.

d)Physical and health hazards arising from the exposure to or handling of substances;

e)Measures taken by ;the occupier to ensure safety and control of physical and health hazards;

f)Measures to be taken by the workers to ensure safe handling, storage and transportation of hazardous substances;

g)Personal Protective Equipment required to be used by workers employed in 'hazardous process' or 'dangerous operations';

h)Meaning of various labels and markings used on the containers of hazardous substances as provided under Rule 101;

i)Signs and symptoms likely to be manifested on exposure to hazardous substances and to whom to report;

j)Measures to be taken by the workers in case of any spillage or leakage of a hazardous substance;

k)Role of workers vis-à-vis the emergency plan of the factory, in particular the evacuation procedures.

1)Any other information considered necessary by the occupier to ensure safety and health of workers.

2)The information required by sub-rule (1) shall be compiled and made known to workers individually through supply of booklets or leaflets and display of cautionary notices at the work places.

3)The booklets, leaflets and the cautionary notices displayed in the factory shall be in the language understood by the majority of the workers and also explained to them.

4)The Chief Inspector may direct the occupier to supply further information to the workers as deemed necessary.

Rule 103. Disclosure of Information to the Chief Inspector

1)The occupier of every factory carrying on 'hazardous process' shall furnish, in writing, to the Chief Inspector, a copy of all the information furnished to the workers.

2)A copy of compilation of Material Safety Data Sheets in respect of hazardous substances used, produced or stored in the factory shall be furnished to the Chief Inspector, and the local inspector.

3)The occupier shall also furnish any other information asked for by the Chief Inspector from time to time for the purpose of the Act and Rules made thereunder.

Rule 104. Information on Industrial Wastes

1)The information furnished under Rule 102 and 103 shall include the quantity of the solid and liquid wastes generated per day, their characteristics and the method of treatment such as incineration of solid wastes, chemical and biological treatment of liquid wastes, and arrangements for their final disposal.

2)It shall also include information on the quality and quantity of gaseous waste discharged through the stacks or other openings, and arrangements such as provision of scrubbers, cyclone separators, electro-static precipitators or similar such arrangements made for controlling pollution of the environment.

3)The occupier shall also furnish the information prescribed in the sub-rules (1) and (2) to the State Pollution Control Board.

Rule 105. Review Of The Information Furnished To Workers Etc.

1)The occupier shall review once in every calendar year and modify, if necessary, the information furnished under Rule 102 and 103 to the workers and the Chief Inspector.

2)In the event of any change in the process or operations or methods of work or hen any new substance is introduced in the process or in the event of a serious accident taking place, the information so furnished shall be reviewed and modified to the extent necessary.

Rule 106. Confidentiality of Information

The occupier of a factory carrying on 'hazardous process' shall disclose all information needed for protecting safety and health of the workers to-

a)his workers and

b)Chief Inspector.

as required under Rule 102 and 103. If the occupier is of the opinion that the disclosure of details regarding the process and formulations will adversely affect his business interests, he may make a representation to the Chief Inspector shall give an opportunity to the occupier of being heard and pass an order to the representation. An occupier aggrieved by an order of Chief Inspector may prefer an appeal before the State Government within a period of 30 days. The State Government shall give an opportunity to the occupier of being heard and pass an order. The order of the State Government shall be final.

Rule 107. Medical Examination

Rules framed under Section 41-B, 41-C and 112-Specified responsibility of the occupier in relation to hazardous process.

1)Workers employed in “hazardous process” shall be medically examined by a qualified medical practitioner hereinafter referred to as Factory Medical Officer, in the following manner:-

a)Once before employment, to ascertain physical fitness of the person to the particular job;

b)Once in a period of 6 months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Factory Medical Officer it is necessary to do so at a shorter interval in respect of any workers.

c)The details of pre-employment and periodical medical examination carried out as aforesaid shall be recorded in the Health Register in

Form 29.

2)No person shall be employed for the first time without a certificate of Fitness in

Form 28 granted by the Factory Medical Officer. If the Factory Medical Officer declares a person unfit for being employed in any process covered under sub-rule(1), such a person shall have the right to appeal to the Inspector who shall refer the matter to the Certifying Surgeon whose opinion shall be final in this regard. If the Inspector is also a Certifying surgeon, he may dispose of the application himself.

3)Any findings of the Factory Medical Officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Certifying surgeon who shall in turn, examine the concerned worker and communicate his findings to the occupier within 30 days. If the Certifying Surgeon is of the opinion that the worker so examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Certifying Surgeon, fully incapacitated in which case the worker affected shall be suitably rehabilitated.

4)A certifying Surgeon on his own motion or on a reference from an Inspector may conduct medical examination of a worker to ascertain the suitability of his employment in a hazardous process or for ascertaining his health status. The opinion of the Certifying Surgeon in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

5)The worker taken away from employment in any process under sub- rule (2) may be employed again in the same process only after obtaining the Fitness Certificate from the Certifying Surgeon and after making entries to that effect in the Health Register.

6)The worker required to undergo medical examination under these rules and for any medical survey conducted by or on behalf of the Central or the State Government shall not refuse to undergo such medical examination.

Rule 108. Occupational Health Centres

1)In respect of any factory carrying on 'hazardous process' there shall be provided and maintained in good order and Occupational Health Centre with the services and facilities as per scale laid down hereunder:-

a)For factories employing upto 50 workers -

i)the services of a Factory Medical Officer on retainer-ship basis, in his clinic to be notified by the occupier. He will carry out the pre-employment and periodical medical examination as stipulated in rule 107 and render medical assistance during any emergency.

ii)a minimum of 5 persons trained in first-aid procedures amongst whom at least one shall always be available during the working period;

iii)a fully equipped first-aid box.

b)For factories employing 51 to 200 workers -

i)An Occupational Health Centre having a room with a minimum floor area of 15 sq.m. with floors and walls made of smooth and impervious surface and with adequate illumination and ventilation as well as equipment as per the schedule annexed to this Rule.

ii)a part-time Factory Medical Officer shall be in over all charge of the Centre who shall visit the factory at least twice in a week and whose services shall be readily available during medical emergencies; iii)one qualified and trained dresser-cum-compounder on duty throughout the working period;

iv)a fully equipped first aid box in all the departments;

c)For factories employing above 200 workers;

i)One full-time Factory Medical Officer for factories employing upto 500 workers and one more Medical Officer for every additional 1000 workers or part thereof;

ii)an Occupational Health Centre having at least 2 rooms each with a minimum floor area of 15 sq. metre with floors and walls made of smooth and impervious surface and adequate illumination and ventilation as well as equipment as per the schedule annexed to this Rule.

iii)there shall be one nurse, one dresser-cum-compounder and one sweeper-cum-ward boy through-out the working period.

iv)the Occupational Health Centre shall be suitably equipped to manage medical emergencies.

2)The Factory Medical Officer required to be appointed under sub-rule (1) shall have qualifications included in Schedule to the Indian Medical Degree Act of 1916 or in the Schedules to the Indian Medical Council Act, 1956 and posses a Certificate of Training in Industrial Health of minimum three months duration recognised by the State Government;

Provided that-

i)person possessing a Diploma in Industrial Health or equivalent shall not be required to possess the certificate of training as aforesaid;

ii)the Chief Inspector may, subject to such conditions as he may specify, grant exemption from the requirement of this sub-rule, if in his opinion a suitable person possessing the necessary qualification is not available for appointment;

iii)in case of a person who has been working as a Factory Medical Officer for a period of not less than 3 years on the date of commencement of this rule, the Chief Inspector may, subject to the condition that the said person shall obtain the aforesaid certificate of training within a period of three years, relax the qualification.

3)The syllabus of the course leading to the above certificate, and the organisations conducting the Course shall be approved by the Directorate General of Factory Advice Service and Labour Institutes or the State Government in accordance with the guidelines issued by the DGFASLI.

4)Within one month of the appointment of Factory Medical Officer, the occupier of the Factory shall furnish to the Chief Inspector the following particulars-

a)Name and address of the Factory Medical Officer;

b)Qualifications

c)Experience, if any, and

d)the sub-rule under which appointed.

SCHEDULE

Equipment for Occupational Health Centre in Factories 1.

A glazed sink with hot and cold water always available.

2.A table with a smooth top at least 180 cm ×105 cm.

3.Means for sterlizing instruments

4.A couch

5.Two buckets or containers with close fitting lids

6.A kettle and sprit stove or other suitable means of boiling water.

7.One bottle of spiritus ammoniac aromaticus (120ml.)

8.Two medium size sponges

9.Two 'kidney' trays

10.Four cakes of toilet preferably antiseptic soap

11.Two glass tumblers and two wine glasses

12.Two clinical thermometers

13.Two tea spoons

14.Two graduated (120 ml) measuring glasses

15.One wash bottle (1000 cc) for washing eyes

16.One bottle (one litre) carbolic lotion 1 to 20

17.Three chairs

18.One screen

19.One electric heater.

20.An adequate supply of tetanus toxide

21.Coramine liquid (60 ml)

22.Tablets-antihistaminic, antispasmodic (25 each)

23.Syringes with needles - 2 cc, 5 cc and 10 cc

24.Two needle holders, big and small

25.Suturing needles and materials

26.One dissecting forceps

27.One dressing forceps

28.One scalpels

29.One stethoscope

30.Rubber bandage-pressure bandage

31.Oxygen cylinder with necessary attachments

32.One blood pressure apparatus

33.One patellar Hammer

34.One peak-flow meter for lung function measurement

35.One Stomach wash set

36.Any other equipment recommended by the Factory Medical Officer according to specific need relating to manufacturing process

37.In addition-

1)For factories employing 51 to 200 workers-

1.Four plain wooden splints 900 mm ×100 mm ×6 mm.

2.Four plain wooden splints 350 mm ×75 mm ×6 mm.

3.Two plain wooden splints 250 mm ×50 mm ×12 mm.

4.One pair artery forceps

5.Injections- morphia, pethidine, atronine, adrenaline, coramine, novacan (2 each)

6.One surgical scissors

2)For factories employing above 200 workers

1.Eight plain wooden splints 900 mm ×100 mm ×6mm.

2.Eight plain wooden splints 350 mm ×75 mm ×6mm.

3.Four plain wooden splints 250 mm ×50 mm 12 mm

4.Two pairs artery forceps

5.Injections - morphia, pethidine, atropine, adrenaline, coramine, novacan (4 each)

6. Two surgical scissors

Rule 109. Ambulance Van

1)In any factory carrying on 'hazardous process' there shall be provided and maintained in good condition, a suitably constructed ambulance van equipped with items as per sub-rule (2) and manned by a full-time Driver-cum-Mechanic and a Helper trained in first-aid, for the purpose of transportation of serious cases of accidents or sickness. The ambulance van shall not be used for any purpose other that the purpose stipulated herein and will normally be stationed at or near to the Occupational Health Centre; Provided that a factory employing less than 200 workers may make arrangements for procuring such facility at short notice from a nearby hospital or other places, to meet any emergency.

2)The Ambulance should have the following equipment

a)General

-A wheeled stretcher with folding and adjusting devices; with the head of the stretcher capable of being tilted upward;

-Fixed suction unit with equipment;

-Fixed oxygen supply with equipment;

-Pillow with case; -Sheets; -Blankets; -Towels;

-Emesis bag; -Bed pan; -Urinal pan; -Glass

b)Safety equipment

-Flares with life of 30 minutes; - Flood lights;

-Flash lights; -Fire extinguisher dry powder type;

-Insulated gauntlets

c)Emergency Care Equipment

i)Resuscitation

-Portable suction unit; Portable oxygen units;

-Bag-valve-mask, hand operated artificial ventilation unit;

-Airways; -Mouth gags; -Tracheestomy adapters;

-Short spine board; -I.V. Fluids with administration unit;

-B.P. Manometer; -Cugg; -Stethoscope

ii)Immobilization

-Long and short padded boards; - wire ladder splints;

-Triangular bandage; - Long and short spine boards

iii)Dressings

-Gauze pads -4" ×4" ; -Universal dressing 10" ×36";

-Roll of aluminium foils; - Soft roller bandages 6" ×5 yards;

-Adhesive tape in 3" roll; - Safety pins:

-Bandage sheets; -Burn sheet;

iv)Poisoning

-Syrup of Ipecac; -Activated Charcoal Pre packeted in dozes; snake bite kit;

v)Emergency Medicines
-As per requirement (under the advice of Medical Officer only)

Rule 110. Decontamination Facilities

In every factory, carrying out 'hazardous process' , the following provisions shall be made to meet emergency:-

a)fully equipped first aid box;

b)readily accessible means of water for washing by workers as well as for drenching the clothing of workers who have been contaminated with hazardous and corrosive substance; and such means shall be as per the scale shown in the Table below-

TABLE

No. of persons employed at any time	No. of drenching showers
i) Upto 50 workers	2
ii)Between 51 to 200 Workers	2 + 1 for every additional 50 or part thereof.
iii)Between 201 to 500 workers	5 + 1 for every additional 100 or part thereof
iv)501 workers and above.	8 + 1 for every additional 200 or part thereof.

c) a sufficient number of eye wash bottles filled with distilled water or suitable liquid, kept in boxes or cupboards conveniently situated and clearly indicated by a distinctive sign which shall be visible at all times.

Rule 111. Making Available Health Records To Workers

1)The occupier of every factory carrying out a 'hazardous process' shall make accessible the health records including the record of worker's exposure to hazardous process or, as the case may be, the medical records of any worker for his perusal under the following conditions:-

a)Once in every six months or immediately after the medical examination whichever is earlier;

b)If the Factory Medical Officer or the Certifying Surgeon as the case may be, is of the opinion that the worker has manifested signs and symptoms of any notificable disease as manifested signs and symptoms of any notificable disease as specified in the Third Schedule of the Act;

c)If the worker leaves the employment;

d)If any one of the following authorities so direct

-the Chief Inspector of Factories;

-the Health Authority of the Central or State Government;

-Commissioner of Workmen's Compensation;

-the Director General, Employees State Insurance Corporation;

-the Director General, Factory Advice Service and Labour Institutes.

2)A copy of the upto date health records including the record of worker's exposure to hazardous process or, as the case may, the medical records shall be supplied to the worker on receipt of an application from him. X-ray plates and other medical diagnostic reports may also be made available for reference to his medical practitioner.

Rule 112. Qualifications etc. of Supervisors

1)All persons who are required to supervise the handling of hazardous substances shall possess the following qualifications and experience:

a) i) A degree in Chemistry or Diploma in Chemical Engineering or Technology with 5 years experience; or

ii)A Master's Degree in Chemistry or a Degree in Chemical Engineering or Technology with 2 years experience.

The experience stipulated above shall be in process operation and maintenance in the Chemical Industry.

b)The Chief Inspector may require the supervisor to undergo training in Health and Safety.

2)The syllabus and duration of the above training and the organisations conducting the training shall be approved by the DSFASLI or the State Government in accordance with the guidelines issued by the DGFASLI.

Rule 113. Issue Of Guidelines

For the purpose of compliance with the requirements of sub-sections (1) (4) and (7) of Section 41-B or 41-C the Chief Inspector may, if deemed necessary, issue guidelines from time to time to the occupiers of factories carrying on 'hazardous process'. Such guidelines may be based on National Standards, Codes of Practice, or recommendations of International Bodies such as ILO and WHO.

Rule 114. Quality of personal protective equipment.

All personal protective equipments provided to workers as required under any of the provisions of the Act, or the rules shall have certification by Indian Standard Institute.

Rule 115. Protective equipment.1 & 2

(1) All workers should be mandatorily provided with Personal Protective Equipments (PPEs) as required under any of the provisions of the Act or the Rules and such PPEs shall conform to the relevant **National Standards**. The occupiers shall require the workers to use such PPEs and the same shall be maintained in proper working conditions by the occupier. No charge what so ever shall be charged by the occupier from the workers for provision of such PPEs.

(2) Without prejudice to the generality of the provisions of sub-rule(1), the various types of PPEs to which this rule shall extend for use in factories shall be as prescribed below.

i. **Safety Helmet** - All workers who are likely to be exposed to any hazard which may cause head injury shall be provided with safety helmets conforming to relevant **National Standards**. All the workers shall be adequately trained on proper use of such PPEs. When work at height is being carried out such safety helmet shall be provided with a nape strap. No safety helmet which has resisted an impact shall be reused. Periodic cleaning and visual inspection to check any deformation in size or shape shall be carried out.

ii. **Protective Footwear -** Protective footwear should be provided to workers who are exposed to hazards which are likely to cause injury to them by way of materials being dropped on their feet or nail or other sharp objects penetrating their sole. The type and

nature of foot wear to be used at workplaces shall be decided by the occupier based on nature of work being carried at such work places. Proper disinfection shall be carried out to prevent contagious fungal infection of the skin that causes scaling, flaking, and itching of the affected areas. Proper medical care shall be carried out to prevent workers from suffering from ingrown nails, metalarsalgia, heel spur, hammer toes and never damage after wearing safety shoe.

[1]Sixth Amendment vide No.F.7(121)-FB/AM(Vol.-II)/2007/1841 dtd., 29.11.2019. [2]Tenth Amendment vide No.F.7(121)-FB/AM(Vol.-II)/2007/2199-07 dtd., 27.01.2021

iii. **Safety Goggles and Spectacles –** The relevant National Standard shall be applicable for eye-protection intended for use in industrial undertakings to provide protection for the eyes of the workers against hazards such as flying particles and fragments, splashing materials and molten metal's harmful dust, gases or vapours, aerosols and radiations which are likely to impair vision or damage the eyes. Additional eye-protection over their prescription lenses shall be used ensuring that the protective eyewear does not disturb the proper positioning of the prescription lenses.

iv. **Equipment for eye and face protection during welding** – Relevant National Standard shall be followed for the requirements of goggles, hand shield and helmet intended to protect an operator above the shoulder from harmful radiation, spark and particles of hot metal during welding, cutting and similar operations employing a gas flame or electric arc.

v. **Gloves and Protective Clothing** - Suitable gloves, leather gauntlets and mittens conforming to relevant **National Standard** shall be used for protection of hand of the workers from getting injured. Such protective gloves shall be provided where the hands are exposed to hazards such as those from skin absorption of harmful substances; severe cuts or lacerations; severe abrasions; punctures; chemical burns; thermal burns; and harmful temperature extremes. Suitable protective clothing as per relevant National Standard available for apron (Rubberized, acid and alkali resistant) shall be used for protection of workers who are likely to be exposed to any hazard which may cause injury to their skin.

vi. **Ear Protection when exposed to noise -** Protection against the effects of noise exposure shall be provided when the sound levels exceed the prescribed standards. The relevant National standard shall be followed while selection of suitable ear protection. Periodic disinfection of reusable ear protectors shall be carried out to eliminate hearing loss caused by infection, discharge, pain etc. in the ear.

vii. **Respiratory Protection -** Respiratory Protective equipment based on the nature of hazard as per the relevant National Standard shall be provided by the occupier of the factory to the workers for their respiratory protection against dust, fumes, gases, particulates etc. Clinical examination and appropriate medical tested shall be undertaken to avoid Irritant dermatitis, nose bridge sores, etc. because of prolong use of respiratory personal protective equipment.

viii. **Other Protective Equipment -** Appropriate personal protective equipment based on the nature of hazards as per the relevant **National Standard** shall be provided by the occupier to the workers. These shall include the following:-

a.Safety harnesses with independently secured lifelines where protection against falls cannot be provided by other appropriate means.

b.Life vests and life preservers where there is a danger of falling into water.

c.Distinguishing clothing or reflective devices or otherwise conspicuously visible material when there is regular exposure to danger from moving vehicles.

(3) The Inspector may, having regard to the nature of the hazards involved in work and process being carried out, order the occupier or the manager in writing to supply to the workers exposed to particular hazard any personal protective equipment conforming to relevant National Standard and if no such National standard is available, they shall confirm to international standards.

(4) The personal Protective Equipment not having relevant National standard shall be:

a.Compliant with EN (European Standard) or ANSI American National standards Institute) or ISO (International Organization for Standardization) as modified from time to time till the relevant National Standard(s) is made available.

b.Certified by DGFASLI, if such personal protective equipment are compliant with international standard other than those standards specified under sub rule (a)

c.Used after only thorough testing by NABL accredited test facility adhering to such test procedure, prescribed under the relevant international standard(s) as modified from time to time by the Ministry of Labour & Employment, Government of India.

Provided that the Personal Protective Equipment not having relevant National Standard & conforming to International Standard specified under sub-rules(a) and (b) of rule 4 shall be permitted to be used notwithstanding the requirements specified under sub-rule(c) of rule 4 up to 31.12.2021 after production of testing certificates issued under corresponding international standard for ensuring conformity assessment.

Rule 116. Thermic Fluid Heaters:-

1)All heaters shall be of such construction that coils are removable for periodic cleaning, visual inspection and hydraulic test.

2)Suitable arrangements shall be made for cooling the furnace effectively in case of power failure.

3)Before restarting the furnace, it shall be effectively purged.

4)Velocity of flow of the thermic fluid shall not be allowed to fail below the minimum recommended by the manufacturers while the heater is in operation.

5)The thermic fluid shall be circulated in closed circuit formation with an expansion-cum-deairator tank. This tank shall be located outside the shed where the heater is installed.

6)Every heater shall be provided with a photo-register actuated audio-visual alarm to indicate flame failure and automatic burner cut off.

7)The stack temperature monitor-cum-controller with audiovisual alarm shall be provided so as to warn the operator in case the outlet temperature exceeds the specified minimum.

8)Where inspection doors are provided on the furnace they shall be inter-locked with the burner itself so that they cannot be opened until burner is shut off and furnace is cooled sufficiently.

9)All heaters shall also be provided with the following safety devices:-

i)Level control in the expansion tank;

ii)Temperature control of thermic fluid;

iii)differential pressure switch on the outlet line of the heater tubes; and

iv)temperature control device for the fuel oil supply to the burner.

10)All devices mentioned in paragraph (9) shall have interlocking arrangement with burner so that in case of any predetermined limits being crossed the supply of fuel and air to burner shall automatically be cut-off.

11)All safety interlocks when operated shall be indicated on the control panel of the heater by a suitable audio-visual alarm.

12)Every heater unit shall be provided as a standard accessory and arrangement for sniffing with low pressure steam or nitrogen for putting out the fire.

13)Electric panel for the heater shall be located near the heater but not so close as to be exposed to spilling or leakage oil.

14)The heater shall be located in a place partitioned off with fire proof material from other manufacturing activities.

15)Explosion vent shall be so installed that release takes place at safe location. 16)The heater coil shall be subjected to pressure test by competent person once atleast in every 12 months. The test pressure shall not be less than twice the operating pressure.

17)If repairs are carried out to the coil, it shall be tested before taking it into use. 18)The thermic fluid shall conform to the specifications prescribed by the manufacturers and shall be tested by competent person for suitability atleast once in every three months period. Such test shall include test for acidity, suspended matter, ash contents, viscosity and flash point.

19)Cleaning of internal surface of the heater or soot and check up of refractory surface on the inside shall be carried out every month or as often as required depending upon working conditions. The coils shall be removed and surface of the coils cleaned thoroughly once at least in a period of six months. The burner, nozzles oil filters and pumps shall be cleaned once a week during the periods of use.

20)A separate register containing the following information shall be maintained:-

i)weekly checks carried out confirming the effectiveness of the interlock,

ii)weekly checks confirming that all accessories are in good state of repairs, and

iii)information regarding fuel oil temperature, pressure, thermic fluid inlet/outlet pressure and temperature, fuel gas temperature, recorded at four hourly interval.

21)The heater when in operation shall always be kept in charge of a trained operator.

Chapter V

WELFARE

117	**Washing facilities**
118	**Facilities for keeping clothing**
119	**First -Aid Appliances**
120	**Notice regarding first-aid**
121	**Ambulance Room**
122	**Canteens**
123	**Dining Hall**
124	**Equipment**
125	**Prices to be charged**
126	**Accounts**
127	**Managing Committee**
128	**Annual Medical Examination**
129	**Shelters, Rest Rooms And Lunch Rooms**
130	**Creches**
131	**Wash room**

132	**Supply of Milk & Refreshment**
133	**Creche staff and clothes for crèche staff**
134	**Qualification of women-in-charge**
135	**Exemption From The Provision Of Creche**

Rule 117. Washing facilities

1.There shall be provided and maintained in every factory for the use of employed persons adequate and suitable facilities for washing which shall include soap and nail brushes or other suitable means of cleaning and the facilities shall be conveniently accessible and shall be kept in a clean and orderly condition.

2.Without prejudice to the generality of the forgoing provisions, the washing facilities shall include-

a)a trough with taps or jets at intervals of not less than 60 centimeters; or

b)wash basins with taps attached thereto; or

c)taps on stand-pipes; or

d)showers controlled by taps; or

e)circular through of fountain type;

Provided that the Inspector may, having regard to the needs and habits of the workers, fix the proportion in which the aforementioned types of facilities shall, be installed.

3. a) Every trough and basin shall have a smooth, impervious surface and shall be fitted with a waste-pipe end plug.

b)The floor or ground under and in the immediate vicinity of every through, tap, jet, wash-basin, stand-pipe and shower shall be so laid or finished as to provide a smooth impervious surface and shall be adequately drained.

4.For persons whose work involves contact with any injurious or noxious substance there shall be at least one tap for every fifteen persons, and for persons whose work does not involve such contact the number of taps shall be as prescribed in

the schedule annexed hereto.

Schedule

Number of Workers	Number of taps
Upto 20	1
21 to 35	2
36 to 50	3
51 to 150	4
151 to 200	5
Exceeding 200 but not exceeding 500	5 plus one tap for every 50 or fraction of 50.0Exceeding 11 plus one tap for every100 or fraction of 100

5. If female workers are employed, separate washing facilities shall be provided and so enclosed or screened that the interiors are not visible from any place where persons of the other sex work or pass. The entrance to such facilities shall bear conspicuous notice “For Women Only” in the language understood by the majority of the workers and shall also be indicated pictorially.

6.The water supply to the washing facilities shall be capable of yielding at least 27 liters a day for each person employed in the factory shall be from a source approved in writing by the Health Officer:

Provided that where the Chief Inspector is satisfied that such an yield is not practicable he may by certificate in writing permit the supply of a smaller quantity not being less than 5 liters per day for every person employed in the factory.

Rule 118. Facilities for keeping clothing

All classes of factories mentioned in the schedule annexed hereto shall provide facilities for keeping clothing not worn during working hours and for the drying of wet clothing. Such facilities shall include the provision of arrangements approved by the Chief Inspector of Factories.

SCHEDULE

Glass works.
Engineering workshops.
Iron and steel works.
Oil mills.
Chemical works.
Automobile workshops.
Dyeing works.
Tanneries.

Rule 119. First -Aid Appliances :

The first-aid boxes or cup-boards shall be distinctively marked with a red cross on white background and shall contain the following equipments -

a)For factories in which the number of persons employed does not exceed ten or (in the case of factories in which mechanical power is not used) does not exceed fifty persons, each first aid box or cup-board shall contain the following equipment:-

1.Six small size sterilized dressings in separate sealed packets.
2.Six medium size sterilized dressings in separate sealed packets.
3.Six large size sterilized dressings in separate sealed packets.
4.Six large size sterilized burn dressings in separate sealed packets.
5.One (60 ml) bottle of 1% cetrimide solution or equivalent antiseptic solution.
6.One (60 ml) bottle of mercurochrome solution (2%) in water.
7.One (30 ml) bottle of liquid ammonia aromatics having the dose and mode of administration indicated on the label.
8.One (60 ml) bottle of tincture of iodine (5%)
9.One pair of surgical scissors (blunt ended)
10.One roll or adhesive plaster (7.5 cm ×1 metre)
11.Six pieces of sterilized eye pads in separate sealed packets 12.Two strips containing 20 tablets of paracetamol (500 mg) or any other substitute.
13.One Undyne eye wash (100 ml) for eye washing or polythene wash bottles with sterile distilled water 500 ml.
14. A M B U Bag - 1
15. Rubber air-ways - 2
16.Splints of suitable sizes
17.One tube of iodoform (topical) ointment.
18.One (30 ml) dark coloured bottle containing potassium permanganate crystals.
19.One cotton wool rolls (100 gm)
20.Tourniquet.
21.Safety Pins -1 dozen
22.Roller bandages 910 cm wide) -12
23.Triangular bandages -1
24.Kidney trays (stainless steel)
25.Artery forceps - 1 pair
26.Dressing forceps - 1 pair
27.Antiseptic soap cake (with case) - 1

28.Torch-light with dry cells - 1

29.Copy of the First aid leaflet issued by the DGFASLI, Govt. of India, Bombay (properly laminated).

b)For factories in which mechanical power is used and in which the number of persons employed exceeds ten but does not exceed fifty, each first aid box or cupboard shall contain the following equipment:-

1.Six small size sterilized dressings in separate sealed packets.

2.Six medium size sterilized dressing in separate sealed packets.

3.Six large size sterilized dressing in separate sealed packets.

4.Six large size sterilized burn dressings in separate sealed packets.

5.One (120 ml) bottle of 1% cetrimide solution or equivalent antiseptic solution.

6.One (120 ml) bottle of mercurochrome solution 2% in water.

7.One (60 ml) bottle of liquid ammonia, aromaticus having the dose and mode of administration indicated on the label.

8.One (120 ml) bottle containing tincture of iodine (5%) .

9.One pair of surgical scissors (blunt ended).

10.One roll of adhesive plaster (7.5 ×1 metre).

11.Six pieces of sterilized eye pads in separate sealed packets.

12.Two strips containing 20 tablets of paracetamol (500 mg) or any other substitute.

13.Undyne eye wash (100 ml) for eye washing or polythene wash bottle with sterile distilled water 500 ml.

14. A M B U bag - 1

15. Rubber air-ways - 2

16.Splints of suitable sizes.

17.One tube of iodoform (topical) oinment

18.One (30 ml) dark coloured bottle containing potassium permanganate Crystals.

19.Cotton wool rolls (100 gm) each -2

20.Touniquet -1

21.Safety pins -1 dozen

22.Roller bandages (10 cm wide) - 12

23.Triangular bandages - 1

24.Kidney trays (stainless steel) - 1

25.Artery forceps - 1 pair

26.Dressing forceps - 1 pair

27.Antiseptic soap cake (with case) - 1

28.Torch light with dry cells - 1

29.Copy of the first aid leaflet issued by DGFASLI, Govt. of India, Bombay (properly laminated)

c)For factories employing more than fifty persons, each first aid box or cupboard shall contain the following equipments:-

1.Twelve small size sterilized dressings in separate sealed packets.

2.Twelve medium size sterilized dressings in separate sealed packets.

3.Twelve large size sterilized dressings in separate sealed packets. 4.Twelve large size sterilized burn dressings in separate sealed packets. 5.Two (120 ml) bottle of 1% cetrimide solution or equivalent antiseptic solution.

6.One (120 ml) bottle of loquor ammonia aromaticus having the dose and mode of administration indicated on the label.
7.One (120 ml) bottle of mercurochrome solution 2% in water.
8.One (120 ml) bottle containing tincture of iodine (5%)
9.Two pairs of surgical scissors (blunt ended)
10.Two rolls of adhesive plaster (7.5 cm ×1)
11.Twelve pieces of sterilized eye pads in separate sealed packets. 12.Four strips containing 40 tabs of paracetamol (500 mg) or any other substance.
13.One Undyne eye wash (100 ml) for eye washing or polythene wash bottles with sterile distilled water 500 ml.
14. A M B U bag - 1
15. Rubber air-ways - 4
16.Splints of suitable sizes
17.Two tubes of Iodoform (topical) oinment
18.One (30 ml) dark coloured bottle containing potassium permanganate crystals.
19.Two cotton wool rolls (100 gm) each.
20.Tourniquet - 2
21.Safety pins - 2 dozens
22.Roller bandages (10 cm wide) - 24
23.Traingular bandages - 2
24.Kidney trays (stainless steel) - 2
25.Artery forceps - 2
26.Dressing forceps - 1 pair
27.Antiseptic soap cake with case - 2
28.Torch light with dry cells - 1
29.Copy of the first-aid leaflet issued by the DGFASLI, Govt. of India, Bombay (properly laminated).

Rule 120. Notice regarding first-aid.

A notice containing the names of the persons working within the precincts of the factory who are trained in first-aid treatment and who are in charge of the first-aid boxes or cupboards shall be posted in every factory at a conspicuous place and near each such box or cupboard. The notice shall also indicate workroom where the said person shall be available. The name of the nearest hospital and its telephone number shall also be mentioned prominently in the same notice.

Rule 121. Ambulance Room.

1.Every ambulance room shall be under the charge of at least one whole-time qualified medical practitioner (hereinafter referred to as medical officer) assisted by at least one qualified nurse or dresser-cum-compounder and one nursing attendant in each shift. Provided that where a factory works in more than one shift the Chief Inspector, if he is satisfied that on account of the size of the factory, nature of hazards or frequency of accidents, it is not necessary to employ a whole- time medical officer for each shift separately, may, with the previous approval of the State Government, grant exemption from the provisions of this sub-rule and permit employment of only one whole-time medical officer for more than one or all shifts, subject to the conditions that-

a)there shall be no relaxation in respect of nursing staff; and

b)the medical officer is readily available on call during the working hours of the factory.

2.There shall be displayed in the ambulance room a notice giving the name, address and telephone number of the medical practitioner in charge. The name of the nearest hospital and its telephone number shall also be mentioned prominently in the said notice.

3.No medical officer shall be required or permitted to do any work which is inconsistent with or detrimental to the responsibility under this rule.

4.The ambulance room shall be separate from the rest of the factory and shall be used only for the purpose of first-aid treatment and rest. It shall have floor area of at least 24 square metres and smooth, hard and impervious walls and floors, and shall be adequately ventilated and lighted by both natural and artificial means.

There shall be attached to it at least one latrine and urinal of sanitary type. An adequate supply of wholesome drinking water shall be laid on and the room shall contain at least-

i)A glazed sink with hot and cold water always available.

ii)A table with a smooth top at least 180 cm ×105 cm.

iii)Means for sterilizing instruments

iv)A touch

v)Two stretchers

vi)Two buckets or containers with close fitting lids

vii)Two rubber hot water bags

viii)A Kettle and spirit stove or other suitable means of boiling water

ix)Twelve plain wooden splints 900 mm ×100 mm ×6 mm

x)Twelve plain wooden splints 350 mm ×75 mm ×6 mm

xi)Six plain wooden splints 250 mm ×50 mm ×12 mm

xii)Six woollen blankets.

xiii)Three pairs artery forceps

xiv)One bottle of spiritus ammoniac aromaticus (120 ml).

xv)Smelling salts (60 gm)

xvi)Two medium size sponges

xvii)Six hand towels

xviii)Four “kidney” trays

xix)Four cakes of toilet, preferably antiseptic soap.

xx)Two glass tumblers and two wine glasses.

xxi)Two clinical thermometers

xxii)Two tea spoons

xxiii)Two granduated (120ml) measuring glasses

xxiv)Two mini measuring glasses

xxv)One wash bottle (1000 cc) for washing eyes

xxvi)One bottle (one litre) carbolic lotion 1 in 20

xxvii)Three chairs

xxviii)One screen

xxix)One electric hand terch

xxx)Four first-aid boxes or cupboards stocked to the standards prescribed under (c) of rule 01

xxxi)An adequate supply of anti-tetanus toxied

xxxii)Injections - morphia, pethidine, atropine, adrenaline, coramine, novacan (6

each)
xxxiii)Coramine liquid (60 ml).
xxxiv)Tablets- antihistaminic, antispasmodic (25 each).
xxxv)Syringes with needles - 2 cc, 5 cc, 10 cc and 50 cc
xxxvi)Three surgical scissors
xxxvii)Two needle holders, big and small
xxxviii)Suturing needles and materials
xxxix) Three dissecting forceps
xl) Three dressing forceps
xli) Three scapels
xlii) One stethescope
xliii) Rubber bandage - pressure bandage.
xliv) Oxygen cylinder with necessary attachments.

5.The occupier of every factory to which these rules apply shall for the purpose of removing serious cases of accident or sickness, provide in the premises and maintain in good condition a suitable conveyance unless he has made arrangements for obtaining such a conveyance from a hospital.

6.The Chief Inspector of Factories may, by an order in writing, exempt any factory from the requirements of this rule, subject to such conditions as he may specify in that order, if a hospital, ambulance room or dispensary is maintained at or within 200 metres of the precincts of the factory and such arrangements are made as to ensure the immediate treatment of all injuries sustained by workers within the factory and for providing rest to the workers so injured.

Explanation.- For the purpose of this rule, "qualified medical practitioner" means a person holding a qualification granted by an authority specified in the schedule to the Indian Medical Degrees Act, 1916, or in the schedules to the Indian Medical Council Act, 1956.

Rule 122. Canteens –

1.The Occupier of every factory wherein more than 250 workers are ordinarily employed and which is specified by the State Government by a notification in this behalf shall provide, in or near the factory, an adequate canteen according to the standards prescribed in the Rules. The canteen shall be available for the use of the workers, within six months from the date of such notification:
Provided that the State Government may for sufficient reasons, from time to time by an order in writing, extend the said period in respect of any specified factory.

2.The manager of a factory shall submit for the approval of the Chief Inspector plans and site plan, in duplicate, of the building to be constructed or adapted for use as a canteen.

3.The canteen building shall be situated not less than 15 metres from the latrine, urinal, boiler house, coal stacks, ash dumps and any other source of dust, smoke or obnoxious fumes:

Provided that the Chief Inspector may in any particular factory relax the provisions of this sub-rule to such extent as may be reasonable in the circumstances and may require measures to be adopted to secure the essential purpose of this sub-rule. 4.The canteen building shall be constructed in accordance with the plans approved by the Chief Inspector and shall accommodate at least a dining hall, kitchen, store room, pantry and washing places separately for workers and for utensils.

5.In a canteen the floor and inside walls up to a height of 120 centimetres from the floor shall be made of smooth and impervious material; the remaining portion of the

inside walls shall be made smooth by cement plaster or in any other manner approved by the Chief Inspector.

6.The doors and windows of canteen building shall be of fly-proof construction and shall allow adequate ventilation.

7.The canteen shall be sufficiently lighted at all times when any person has access to it.

a)In every canteen-

i)all inside walls of rooms and all ceilings and passages and staircases shall be lime-washed or colour-washed at least one in each year or painted once in three years dating from the period when last lime-washed, colour washed or painted, as the case may be;

ii)all wood work shall be varnished or painted once in three years dating from the period when last varnished or painted;

iii)all internal structural iron or steel work shall be varnished or painted once in three years dating from the period when last varnished or painted;

Provided that inside walls of the kitchen shall be lime washed once every four months.

b)Deleted.

9. Precincts of the canteen shall be maintained in a clean and sanitary condition. Waste water shall be carried away in suitable covered drains and shall not be

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[1]Tenth Amendment vide No.F.7 (121)-FB/AM (Vol.-II)/2007/2199 dtd. 27.01.2021.

allowed to accumulate so as to cause a nuisance. Suitable arrangements shall be made for the collection and disposal of garbage.

Rule 123. Dining Hall –

1.The dining hall shall accommodate at a time at least 30 percent of the workers working at a time.

Provided that , in any particular factory or in any particular class of factories the State Government may, by a notification in this behalf, alter the percentage of workers to be accommodated.

2.The floor area of the dining hall, excluding the area occupied by the service counter and any furniture except tables and chairs, shall be not less than one square metre per dinner to be accommodated as prescribed in sub-rule (1).

Provided that in the case of factories in existence at the date of the commencement of the Act, where it is impracticable, owing to the lack of space, to provide one square metre of floor area for each person, such reduced floor area per person shall be provided as may be approved in writing by the Chief Inspector.

3.A portion of the dining hall and service counter shall be partitioned off and reserved for women-workers, in proportion to their number. Washing place for women shall be separate and screened to secure privacy.

4.Sufficient tables, stools, chairs or benches shall be available for the number of dinners to be accommodated as prescribed in sub-rule (1).

Rule 124. Equipment

1.There shall be provided and maintained sufficient utensils, crockery, cutlery, furniture and any other equipment necessary for the efficient running of the canteen suitable clean clothes for the employees serving in the canteen shall also be provided and maintained.

2.The furniture, utensils and other equipment shall be maintained in a clean and hygienic condition. A service counter, if provided, shall have a top of smooth and impervious material. Suitable facilities including and adequate supply of hot water shall be provided for the cleaning of utensils and equipment.

Rule 125. Prices to be charged. –

1.Food, drink and other items served in the canteen shall be sold on a non-profit basis and the prices charged shall be subject to the approval of the Canteen Managing Committee:

Provided that where a canteen is managed by workers Co-operative society, the prices to be charged may include a margin of profit upto a maximum of 5 per cent of its working capital.

2.In computing the prices referred to in sub-rule (1) the following items of expenditure shall not be taken into consideration, but will be borne by the occupier:-

a)the rent for the land and building;

b)the depreciation and maintenance charges of the building and equipment provided for the canteen;

c)the cost of purchase, repairs and replacement of equipment including furniture, crockery, cutlery and utensils.

d)the water charges and expenses for providing lighting and ventilation; e)the interest on the amount spent on the provision and maintenance of the building, furniture and equipment provided for the canteen.

f)the cost of fuel required for cooking or heating foodstuffs or water; and

g) the wages of the employees serving in the canteen and the cost of uniform, if any, provided to them.

3.The charges per portion of foodstuffs, beverages and any other items served in the canteen shall be conspicuously displayed in the canteen.

Rule 126. Accounts

1.All books of account, registers and any other documents used in connection with the running of the canteen shall be produced on demand to an Inspector.

2.The accounts pertaining to the canteen shall be audited, once every twelve months, by registered accountants and auditors. The balance sheet prepared by the said auditors shall be submitted to the Canteen Managing Committee not later than two months after the closing of the audited accounts:

Provided that the accounts pertaining to the canteen is a Government Factory having its own accounts department, may be audited in such department.

Provided further that where the canteen is managed by a cooperative society registered under the Co-operative Societies Act, the accounts pertaining to such canteen may be audited in accordance with the provisions of the Co-operative Societies Act.

Rule 127. Managing Committee –

1.The manager shall appoint a Canteen Managing Committee which shall be consulted from time to time as to -

a)the quality and quantity of food stuffs to be served in the canteen;

b)the arrangement of the menus

c)the times of meals in the canteen; and

d)any other matter as may be directed by the Committee;

Provided that where the canteen is managed by a co-operative society registered

under the Co-operative Societies Act, it shall not be necessary to appoint a Canteen Managing Committee.

2.The Canteen Managing Committee shall consist of an equal number of persons nominated by the occupier and elected by the workers. The number of elected workers shall be in the proportion of 1 for every 1000 workers employed in the factory, provided that in no case shall there be more than 5 or less than 2 workers on the Committee.

3.The manager shall determine and supervise the procedure for elections to the Canteen Managing Committee.

4.A Canteen Managing Committee shall be dissolved by the manager two years after the last election, no account being taken of a bye-election.

Rule 128. Annual Medical Examination

1.Annual medical examination for fitness of each member of the canteen staff who handles foodstuffs shall be carried out by the factory medical officer or the Certifying Surgeon, which should include the following -

a)routine blood examination at intervals of not more than twelve months.

b)routine and bacteriological testing of faeces and urine for germs of dysentery and typhoid fever at intervals of not more than six months; and

c)any other examination including chest x-ray that may be considered necessary by the factory medical officer or the Certifying Surgeon.

2.Any person who in the opinion of the factory medical officer or the Certifying Surgeon is unsuitable for employment on account of possible risk to the health of others, shall not be employed as canteen staff.

3.The fee for such routine clinical examination of each member of the canteen staff by the certifying surgeons shall be Rs. 25 (twenty five) only which fee is exclusive of any charges incurred for conducting any kind of Laboratory tests etc.

4.Such charges shall be paid by the occupier into the local treasury and receipt attached with the application.

Rule 129. shelters, rest rooms and lunch rooms –

1.The shelters or rest rooms and lunch rooms shall conform to the following standards:

a)the building shall be soundly constructed and all the walls and roof shall be of suitable heat resisting materials and shall be water proof. The floor and walls to a height of 90 centimeters shall be so laid or finished as to provide a smooth, hard and impervious surface;

b)the height of every room in the building shall be not less than 3.65 meters from floor level to the lowest part of the roof and there shall be at least 1.12 square meters of floor area for every person employed;

Provided that workers who habitually go home for their meals during the rest periods may be excluded in calculating the number of workers to be accommodated.

Provided further that, in the case of rooms in buildings in existence at the date of coming into force of this rule which have been or are intended to be adapted for use as shelters, rest rooms or lunch rooms, as the case may be, the Chief Inspector may approve the rooms having such reduced height as may in his opinion be reasonable in the circumstances of the case on such conditions as may be deemed expedient.

c)effected and suitable provision shall be made in every room for securing and maintaining adequate ventilation by the circulation of fresh air and there shall also be provided and maintained sufficient and suitable natural or artificial lighting;

d)Every room shall be adequately furnished with chairs or benches with back-rest;

e)sweepers shall be employed whose primary duty is to keep the rooms, building and precincts thereof in a clean and tidy condition; and

f)suitable provision shall be made in every room for supply of drinking water and facilities for washing.

1)The lunch rooms shall:

a)comply with the requirements laid down in clauses (a) to (f) of sub rule (1) ; and

b)be provided with adequate number of table with impervious tops for the use of workers for taking food.

Rule 130. Creches

a)The crèches shall conform to the following standards and the (Occupier or Manager of the factory) shall submit for approval of the Chief Inspector of Factories, detailed plans in triplicate of the building to be constructed or adapted.

b)The crèche shall be conveniently accessible to the mothers of the children accommodated therein and so far as is reasonably practicable it shall not be situated in the close proximity to any part of the factory where obnoxious fumes, dust or odours are given off or in which excessively noisy processes are carried on.

c)The building in which the crèche is situated shall be soundly constructed and all the walls and roof shall be of suitable heat-resisting materials and shall be water-proof. The floor and internal walls of the crèche to a height of 1.2 metres all-round shall be so laid or finished as to provide a smooth impervious surface.

d)The height of the rooms in the building shall be not less than 3.7 metres from the floor to the lowest part of the roof and there shall be not less than 2 square metres or floor area for each child to be accommodated. Provided that in the case of rooms in buildings in existence at the date of the coming into force of this rule which have been or are intended to be adapter for use as a crèche, the Chief Inspector may approve the rooms having such reduced height as may in his opinion be reasonable in the circumstances of the case on such conditions as may be deemed expedient.

e)Effective and suitable provision shall be made in every part of the crèche for securing and maintaining adequate ventilation by the circulation of fresh air.

f)The crèche shall be adequately furnished and equipped and in particular there shall be one suitable cot or cradle with the necessary bedding for each child (provided that for children over two years of age it will be sufficient if suitable bedding is made available) at least one chair or equivalent seating accommodation for the use of each mother while she is feeding or attending to her child and sufficient supply of suitable toys for the older children.

g)A suitably fenced and shady open air playground shall be provided for the older children.

Provided that the Chief Inspector of Factories may by order in writing exempt any factory from compliance with this sub-rule if he is satisfied that there is not sufficient space available for the provision of such a playground.

Rule 131. Wash room

There shall be in or adjoining the crèche a suitable wash room for the washing of the children and their clothing. The wash room shall conform to the following standards:-

a)The floor and internal walls of the room to a height of 91.4 centimetres shall be so laid or finished as to provide a smooth impervious surface. The room shall be adequately lighted and ventilated and the floor shall be effectively drained and maintained in a clean and tidy condition.

b)There shall be at least one basin or similar vessel for every four children accommodated in the crèche at any one time together with a supply of water provided, if practicable, through taps from a source approved by the Health Officer. Such source shall be capable of yielding for each child a supply of at least 23 litres of water a day.

c)An adequate supply of clean clothes, soap and clean towels shall be made available for each child while it is in the creche.

d)Adjoining the washing room referred to above, a septic type latrine shall be provided for the sole use of the children in the crèche. The design of this latrine and the scale of accommodation to be provided shall be determined by the Health Officer. The crèche latrine shall always be kept clean and in a sanitary condition by a sweeper specially employed for the purpose.

Rule 132. Supply of Milk & Refreshment

At least 250 ml of clean pure milk shall be available for each child on every day it is accommodated in the crèche and the mother of such a child shall be allowed in the course of her daily work two intervals of atleast 15 minutes duration each (other than intervals for rest under section 55) to feed the child. For children above two years of age there shall be provided in addition an adequate supply of wholesome refreshment. In case of any dispute regarding wholesome refreshment (item quantity, quality etc) the decision of the Chief Inspector is final.

Rule 133. Creche staff and clothes for crèche staff:

1)For each crèche there shall be appointed women in-charge and female attendant at the rate of one attendant for every thirty children or as part thereof exceeding ten to help the women-in-charge.

2)the crèche staff shall be provided with suitable clean clothes for use while on duty.

Rule 134. Qualification of women-in-charge:

The women-in-charge shall be either a qualified nurse or midwife.

Provided that the occupier may appoint nurse as midwife who is not qualified if the Chief Inspector in consultation with the Director of Health Services that the nurse or midwife is suitable for appointment.

Rule 135. Exemption from the provision of creche:

1.The provision of section 48 and rules 135-139 shall not apply to any factory which works for less than 190 days in a calendar year or to a factory wherein the number of married women or widows employed does not exceed 15 or the total number of children below the age of 6 years of all the women workers in the factory does not exceed 4, subject to the condition that the alternative arrangements as hereinafter mentioned in sub-rule(2), are provided in the factory.

2.The alternative arrangements required to be provided under sub-rule (1) shall be as follows, namely;-

a)A crèche-room which has an area of not less than 10 square metres shall be constructed or adapted for use in accordance with the plans approved by the Chief Inspector.

b)The crèche-room shall have suitable wash place for washing of the children and their clothes and adequate supply of clean water, soap and, towels shall always be provided and maintained.

c)The crèche-room shall be provided with suitable bedding for the use of the children.

d)At least one female attendant shall be employed to lookafter the children in the crèche-room. The female attendant shall be provided with clean clothes for use while on duty.

3.The mother of each child in the crèche-room shall be allowed two intervals of not less than 15 minutes each (such intervals being other than those allowed under section 55) during her working hours to feed the child.

4.The exemption granted under this rule may at any time be withdrawn by the Chief Inspector if he finds, after such enquiry as he may deem fit, that the factory has committed a breach of this rule.

Chapter VI

Working Hours of Adult

Rule	Description
136	136Compensatory Holidays
137	137Muster Roll for Exempted Factories
138	Cash Equivalent
139	139Restriction of Double Employments
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141	141Register for Adult Workers
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144	144List to be maintained of Persons holding Position of Supervision of management or holding confidential position
145	145Exemption of certain Adult Workers

Rules prescribed under section 53 (2)

Rule 136. Compensatory Holidays

1)Except in the case of workers engaged in any work which for technical reasons must be carried on engaged in any work which for technical reasons must be carried continuously throughout the day, the compensatory holidays to be allowed under sub section (1) of section 53 of the Act shall be so spaced that not more than 2 (two) holidays are given in one week.

2)The manager of the factory shall display, on or before the end of the month which holidays are lost, notice in respect of workers allowed compensatory holidays are lost, notice in respect of workers allowed compensatory holidays during the following month and of the dates thereof, at the place at which the Notice of Periods of Work prescribed under section 61 is displayed. Any subsequent change in the notice in respect of any compensatory holiday shall be made not less than 3 days in advance of the date of holiday.

3)Any compensatory holiday or holidays to which a worker is entitled shall be given to him before he is discharged or dismissed and shall not be reckoned as part of any period of notice required to be given before discharge or dismissal.

4) a) The manager shall maintain a register in

Form 19.

Provided that, if the Chief Inspector is of the opinion that any master roll or register maintained as part of the routine of the workers in the factory the particulars required for the enforcement of section 53, he may by order in writing direct that such master roll or register or return shall, to the corresponding extent, be maintained in place of and be treated as the register or return required under this rule for that factory.

b) This register maintained under clauses (a) shall be preserved for a period of five years after the last entry made in it and shall be produced before the Inspector on demand.

Prescribed under section 59(5)

Rule 137. Muster Roll for Exempted Factories

The manager of every factory: -

a) which is exempted under section 5, or

b)in which workers are exempted under section 64 or section 65, from the provisions of section 51 ore section 54, shall keep a muster roll in

Form 20 showing the normal piece-work rate of play, or the rate of pay per hour, of all the exempted workers in the factories. In this master roll shall be correctly entered the extent of overtime worked by each worker together with the overtime earnings in respect thereof and the dates of the payment of such earnings. The muster roll in Form 20 shallalways be available, produced for inspection whenever required by an Inspector.

Prescribed under section 59(5)

Rule 138. Cash Equivalent

The cash equivalent of the advantage through the concessional sale to a worker of food grains and other articles shall be computed at the end of every wage period fixed under provisions of the Payment of Wages Act, 1936. For the purpose of computing the cash equivalent of the advantage accruing through the concessional sale to a worker of food grains and other articles, the difference between the value of food grains and other articles at the average market rates prevailing during the wage period in which there was overtime work, and the value of food grains and other articles supplied at concessional rates shall be calculated and allowed for the overtime hour worked.

Provided that in the case of factories which are already following a different procedures for calculating the cash equivalent of the advantage accruing through the concessional sale of food grain and other articles at the time of commencement of this rule the Chief Inspector may be order in writing permit them to adopt such different procedure if it is not less favourable than the one prescribed in this rule.

Prescribed under section 60

Rule 139. Restriction of Double Employments

An adult worker may be employed, in more than one factory on the same day, with the previous approval of the Inspector, subject to the following conditions:

1)He shall not be employed for more than nine hours in all on any one day.

2)He shall receive a weekly holiday in accordance with the provision of section 52.

3)Every worker who is required to work in another factory on the same day shall carry with him a card in which the following particulars shall be entered by the manager of the first factory:

a)his normal periods of work as the notice of periods of work, the day;

b)the period or periods he has worked in the first factory for the day.

The manager of the second factory in which he is to work for the rest of the day shall enter in the card the period or periods he has worked for the day in his factory. The managers of both the factories in which the worker has worked on the same day shall send to the Inspector an extract of the card mentioned above not later than three days from the date on which the workers has not worked in the two factories on the same day.

Prescribed under section 61 (B)

Rule 140. Notice of Periods of work for Adult

The Notice of Periods of Work for Adult Workers shall be in

Form 21.

Prescribed under section 62 (2)

Rule 141. Register for Adult Workers

The register of Adult Workers shall be in

Form 22. This register shall be written up a fresh each year and shall be preserved for a period of five years after the date of last entry in it and shall be produced before the Inspector on demand.

Prescribed under section 64

Rule 142. Persons defined to Hold Positions of Supervision or management

In a factory the following person shall be deemed to hold positions of supervision or management within the meaning of subsection (1) of Section 64, provided they are not required to perform manual labour or clerical work as a regular part of their duties namely: -

1)Asst. Engineer, Jr. Engineer.

2)Labour (Welfare) Officer.

3)Safety Officer.

4)Fire Officer.

5)Foreman, Asst. Foreman, Overseer, Supervisor, Head Supervisor, Shift Supervisor, Chargeman, Chief Draughtsman.

6)Boiler Operation Engineer

7)Head Electrician

8)Weaving Master, Spinning Master.

9)Heads of various department/ Section in a factory in any other designation.

10)Any other person who in the opinion of the Chief Inspector holds a position of supervision or management in the factory and is so declared in writing by him.

Rule 143. Persons Defined to Hold Confidential Position

In a factory, the following persons shall be deemed to be employed in a confidential position within the wearing of Sub-section (1) of Section 64: -

i)Private Secretary, Asst. Private Secretary, Personal Assistant, Stenographer.

ii)Telephone Operator, Telex Operator.

iii)Time Keeper, Store Keeper,

iv)Office Superintendent, Head Clerk,

v)Any other person who, in the opinion of the Chief Inspector, holds position of confidential and is so declared in writing by him.

Rule 144. List to be maintained of Persons holding Position of Supervision of management or holding confidential position

1)A list showing the Name & Designations of all persons defined in Rule 147 & 148 shall be maintained in every factory and it shall be made available for inspection to the Inspector at all times where work is being carried on in any factory.

2)Where the ordinary rate of wages of any of the persons whose name is shown in the list maintained under sub rule (1) of this rule does not exceed the wage limit specified in Sub-section (6) of Section –1 of the Payment of wage Act, 1936, as amended from time to time the Manager of the factory shall maintain a muster roll in

Form 20 as prescribed under Rule 142 in respect of such persons.

Rule 145. Exemption of certain Adult Workers

Adult workers engaged in factories specified in column 2 of the Schedule here to annexed, on the work specified in column 4 of the said schedule shall be exempt from the provisions of the sections specified in column 5 thereof, subject to the conditions, if any, specified in column 6 of the said schedule; and also subject to the following conditions, namely: -

i)No women workers shall be required or allowed to work for more than nine hours in any day;

ii)except in respect of exemption under clause (a) of sub-section (2) of section 64, the following limits of work inclusive of overtime shall be observed, namely: -

a)the total number of hours of work in any day shall not exceed tens;

b)the spread over, inclusive of intervals for rest, shall not exceed twelve hours in any one day.

c)the total number of hours in a week, including overtime shall not exceed sixty; and

d)the total number of hours of overtime shall not exceed fifty for any one quarter;

Provided that, the limits imposed by sub- clauses (a) and (b) of this clause shall not apply in the case of a shift workers engaged in the factories specified against category and No. X (1) to (39) in the Schedule if the said worker is allowed to work the whole or part of the immediate subsequent shift in the absence of a worker who has failed to report for duty.

Category	Class of Factory	Exemption under section	Nature of Exempted Work	Exemption from	Conditions
I	All factories	64(2)(a) and 64(3) for consequential exemption from the provisions of section 61.	Urgent, repairs Explanation, Urgent repairs for the purposes of this exemption shall mean (a) repairs to any part of machinery, Plant or structure of a factory, which are of such a nature that delay in their execution would involve danger to human life or a safety or the stoppage of the manufacturing process. b) repairs to deep-sea-ships	51,52,54,55, 56 and 61.	i) The occupier or manager of the factory shall send to the, Inspector a notice within 24 hours of the commencement of the work, starting therein the precise nature of urgent repairs the exact time of the commencement of work. A copy of such notice shall be displayed in the factory as provided under section 108 (2) of the Act. within 24 hours of completion of the work of

and repair to commercial aircrafts which are essential to enable such ships or aircrafts to leave port at proper time or conditions as the case may be, and

c) repairs in connection with a change of motive power e.g. from steam to electricity or vice versa, when such work cannot possibly be done without stoppage of the normal manufacturing process.

Provided that urgent repairs shall not include periodical cleaning and maintenance work.

urgent repairs a notice to that effects shall be sent to the Inspector alongwith the copy of entries made in Form No. 21 in respect of every worker mentioned in the earlier notice.

ii) No worker shall be allowed or required to work on such repairs for more than 15 hours on any one day, 39 hours during any 3 consecutive days or 66 hours during each period of seven consecutive days commencing from his first employment on such work

iii) If the Inspector is of the opinion that any work being carried on in a factory as 'Urgent Repairs is not Urgent Repairs the Inspector shall serve on the manager an order to that effect and the manager shall in respect of such work, require any worker to work in contravention of

					the provision of section 51, 52, 54, 55,56 and shall comply with section 61 of the Act. iv) No worker shall be required or allowed to work for the period of more than six hours before has had an interval of rest or food of at least half an hour. v) Provisions of section 53 of the Act and 142 rules shall be compiled with.
II	All factories except those on continuous process.	64 (2) for work in the nature of preparatory or complementary	a) Maintenance work in connection with the mill gearing, the electric driving of lighting apparatus, the mechanical or electrical lifts or hoists and steam or water pipes or pumps of the factory; b) Departmental boiler and c) Workers attending to the starting, stopping and maintaining electrical motors and connected switch gears.	51, 54, 55 and 56	i) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) provisions of rules 142 shall be compiled with.
III.	All factories	64(2) for work which is necessary Intermittent in nature.	1. a) Work performed by drivers on lighting ventilating on and humidifying	51,54,55 and 56	i) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for

			apparatus b) Work performed by firepumpmen and all personnel on the fire-fighting staff 2. Telephone Operators and Telex Operators.		food and rest shall be given to all workers allowed to work on such work. iii) Provision of Rul3 95 and 96 shall be complied with.
IV	All Factories	64(2) (h) for work in the Engine room, boiler house attending to power plant or transmission machinery or the prime movers.	Workers engaged in engine rooms or boiler house attending to power plant or transmission machinery or the prime movers.	51, 52	Provisions of section 53 and rules 142 shall be complied with.
V.	All factories	64(2) (i) work of loading and unloading	Workers engaged in the loading or unloading of railway wagons or lorries, trucks and tankers or the loading and unloading at jetties.	51, 52, 54, 55, 56, 61	i) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) provisions of rules 142 shall be compiled with.
VI	Carbonic Acid Gas factories	64(2) (b) work in the nature of preparation complementary work	Work of firemen to light lye-boiler	51, 54, 55	i) This exemption shall be availed of only on the day on which the plant is restarted after a closure. ii) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. iii) Intervals for food and rest

					shall be given to all workers allowed to work on such work. iv) provisions of rules 142 shall be compiled with.
VII	1) Cloth printing factories or departments	64(2) (b) work in the nature of preparation complementary work	Work in the nature of preparatory or complementary to main operations of printing sanforizng, finishing and mercarsing of cloth.	51, 54 and 56	provisions of rules 142 shall be compiled with.
	2) Cotton spinning and weaving Mills.	64(2) (b) work in the nature of preparation complementary work	Work involved in clearing blow room flues.	51, 54 and 56	provisions of rules 142 shall be compiled with.
	3) Film Studios	64(2) (b) work in the nature of preparation complementary work	All work in the nature of the preparatory or complementary work which is necessary for the shooting of files.	51, 54 and 56	provisions of rules 142 shall be compiled with.
VIII	Dyeing or beaching factories or department.	64(2) (b) work in the nature of preparation complementary work	Work performed by Kiermen	51, 54, 55 and 56	i) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) provisions of rules 142 shall be compiled with.
IX.	1) Brick Factories.	64(2) (b) for work which for technical reason must be carried	Work of Firemen on Kilns	55	i) No worker shall be required or allowed to work on shifts

	on continuously.			of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work.
2) Cashew Nut factories	64(2) (b) for work which for technical reason must be carried on continuously.	Oil Extraction	55	i) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work.
3) Cloth Printing and processing factories.	64(2) (d) for work which for technical reason must be carried on continuously.	Work of cloth printing, bleaching, furnishing mercerising, raising, dyeing, singeing and sanforizing.	55	i) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work.
4) Collapsible tube manufacturing factories.	64(2) (d) for work which for technical reason must be carried on continuously.	Work of painting coating, drying of collapsible tubes if carried on in a continuous process.	55	i)No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii)Intervals for food and rest shall be given to all workers allowed to work on such work.
5) Cycle manufacturing Automobile manufacturing and manufacturing of Steel furniture.	64(2) (d) for work which for technical reason must be carried on continuously.	Work of painting and enamelling section and service automatic planting plant.	55	i)No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii)Intervals for food and rest

				shall be given to all workers allowed to work on such work.
6) Enamelled wire manufacturing factories.	64(2) (d) for work which for technical reason must be carried on continuously.	Work of enamelling of wires.	55	i)No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii)Intervals for food and rest shall be given to all workers allowed to work on such work.
7) Ferrous and Non-ferrous metal factories.	64(2) (d)for work which for technical reason must be carried on continuously.	Work on Hot Rolling.	55	i)No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii)Intervals for food and rest shall be given to all workers allowed to work on such work.
8) Flour Mills	64(2) (d) for work which for technical reason must be carried on continuously.	All work.	55	i) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work.
9) Gum Industry	64(2) (d) for work which for technical reason must be carried on continuously.	Work performed in connection with sliting, dehusking, grinding and packing.	55	i) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work.

10) India Government Mint.	64(2) (d)for work which for technical reason must be carried on continuously.	Melting Department including dress washing.	55	i) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work.
11) Leather Cloth factories	64(2) (d)for work which for technical reason must be carried on continuously.	Working of continuous coating of PVC drying, fusing in hot air oven and embossing.	55	i) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work.
12) Line Bhatties	64(2) (d)for work which for technical reason must be carried on continuously.	Workers employed on Bhatties.	55	i) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work.
13) Oil Mills.	64(2) (d)for work which for technical reason must be carried on continuously.	All continuous process work.	55	i) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work.
14) Ordnance factories	64(2) (d)for work which for technical	Work in melting shop swarfaneal in	55	i) No worker shall be required or allowed to

	reason must be carried on continuously.	furnace gas producers, electrical sub-stations and water and electrical distribution departments.		work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work.
15) Pharmaceutical	64(2) (d)for work which for technical reason must be carried on continuously.	All continuous process work.	55	i) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work.
16) Plastic factories	64(2) (d)for work which for technical reason must be carried on continuously.	Work on plastic injection moulding machine and extrusion machine.	55	i) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work.
17) Pottery works	64(2) (d)for work which for technical reason must be carried on continuously.	Work of fireman on kilns	55	i) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work.
18)Shellac factories.	64(2) (d)for work which for technical reason must be carried on continuously.	Workers employed on kilns.		i) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for

				food and rest shall be given to all workers allowed to work on such work.
19) Smelting and Refining factories.	64(2) (d)for work which for technical reason must be carried on continuously.	1) Work on the reducing furnace. 2) All continuous process work in connection with electrolytic refining.	55	i) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work.
20) Soap factories.	64(2) (d)for work which for technical reason must be carried on continuously.	Work on soap boiling pans and soap drying pans.	55	i) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work.
21) Sodium and potassium bicarbonate factories	64(2) (d)for work which for technical reason must be carried on continuously.	All works	55	i) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work.
22) Spinning and weaving Mills.	64(2) (d)for work which for technical reason must be carried on continuously.	Work on hot air sizing machine.	55	i) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work

				on such work.
X.	1) Acetylene factories	64(2) (d)for work which forgas and filling technical reasonof cylinders. must be carried on continuously. Generation of	51, 52, 54, 55 and 56.	i) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.

2) Carbonic gas works	64(2) (d)for reasonwork which forfiremen, pumpmen, driver, duration.	of longer than 8	Work of 55 and 56. work on shifts continuously. cylinders.	51, 52, 54, shall be required or allowed to on filling of	i) No worker Acid technical must be carriedplant oilers and the hours ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.

3) Carbonic solidification	64(2) (d)for work which for technical reason must be carried	All works except packing blocks.	51, 52, 54, 55 and 56.	i) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.	Acid works

4) Cement factories and asbestos factories.	64(2) (d)for work which for technical reason must be carried on continuously.	All continuous process work.	51, 52, 54, 55 and 56.	i) No worker shall be required or allowed to cement work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.

5) Chemical factories.	64(2) (d)for work which for technical reason must be carried on continuously.	All continuous process work.	51, 52, 54, 55 and 56.	i) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.

6) Chemical Product factories.	64(2) (d)for work which for technical reason must be carried on	Process of manufacturing activated carbon.	51, 52, 54, 55 and 56.	i) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. continuously. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.

7) Cinematographic processing factories.	64(2) (d)for work which for technical reason must be carried on	Work on developing and washing process.	51, 52, 54, 55 and 56.	i) No worker films shall be required or allowed to work on shifts of longer than 8 hours duration. continuously. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.

8) Coal gas factories	64(2) (d)for work which for technical reason must be carried on continuously.	All work in the retort house and on the water gas plant. Work of the male yard labour staff in unloading coal, feeding hopper and removing cake, work on the siphons, boilers station metres and governors.	51, 52, 54, 55 and 56.	i) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.

9) Computer installation.	64(2) (d)for work which for technical reason must be carried on continuously.	All works.	51, 52, 54, 55 and 56.	i) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
10) Confectionary	64(2) (d)for		51, 52, 54,	i) No worker

Manufacturing Deptt. Of factories.	work which for technical reason must be carried on continuously.	Manufacturing of malted chocolate flavoured food and chocolate making.	55 and 56.	shall be required or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
11) Crude Mineral Oil &	64(2) (d)for work which	a) All	51, 52, 54, 55 and 56.	i) No worker shall be required

Petro-chemical refining factory.	for technical reason must be carried on continuously.	continuous process work performed by the plant operators, fire operators laboratory testers and analysts, maintenance and instrument personnel connected with continuous process work, dressers and sample carriers. b) Work performed by safety operators.		or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
12) Dextrine Manufacturing factories.	64(2) (d)for work which for technical	All continuous process work.	51, 52, 54, 55 and 56.	i) No worker shall be required or allowed to

	reason must be carried on continuously.			work on shifts of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
13) Distilleries which from	64(2) (d)for Work on the extraction of	55 and 56. work on shifts	51, 52, 54, shall be required or allowed to carried on	i) No worker work for technical reason must besugar various bases,

	of longer than 8 hours duration.		continuously.	fermentation of
		sugar cane juice and distillation of fermented wash.		ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
Electrical accumulators, charging deptt. factories.	64(2) (d)for work which for technical reason must be	Operations in connection with charging	51, 52, 54, 55 and 56.	i) No worker 14) shall be required or allowed to work on shifts Of

	carried on continuously.	electrical accumulators.		of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
15) Electrical Stations & Sub-stations.	64(2) (e) for work which for technical reason must be carried on	Operations & maintenance of transformers & it auxiliaries	51, 52, 54, 55 and 56.	i) No worker shall be required or allowed to work on shifts of longer than 8

	continuously.	including receiving and distribution, switchgears, lightning arrester, synchronous and other condensers and rotatory and static condensers.		hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
Electronic components	64(2) (e) for work which for technical reason must be carried on	Welding lacquering and colour	51, 52, 54, 55 and 56.	i) No worker 16) shall be required or allowed to factory work on shifts

			of longer than 8 hours duration.	continuously.
				ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
Ferrous and non-ferrous factories.	64(2) (e) for work which for technical reason must be	Hot rolling	51, 52, 54, 55 and 56.	i) No worker 17) shall be required or allowed to metal work on shifts

	carried on continuously.			of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
Glass factories	64(2) (e) for work which for technical reason must be carried on	All continuous process work including cartoning and	51, 52, 54, 55 and 56.	i) No worker 18) shall be required or allowed to work on shifts

		of longer than 8 hours duration.	continuously.	packing carried out in continuous chain.

ii) Intervals for food and rest shall be given to all workers allowed to work on such work.
iii) Provisions of rules 142 shall be compiled with.
iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1).
v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.

Glycerine factories	64(2) (e) for work which for technical reason must be	All continuous process work	51, 52, 54, 55 and 56.	i) No worker 19) shall be required or allowed to work on shifts

	carried on continuously.			of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
Hydraulic pumping Stations.	64(2) (e) for work which for technical reason must be	All work	51, 52, 54, 55 and 56.	i) No worker 20) shall be required or allowed to work on shifts

	carried on continuously.			of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
21) Ice factories	64(2) (e) for work which for technical reason must be	Work of the engine and compressors	51, 52, 54, 55 and 56.	i) No worker shall be required or allowed to work on shifts

	carried on	drivers and oilers.		of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
Magnesium Chloride Factories.	64(2) (e) for work which for technical reason must be carried on	The work on concentrating process.	51, 52, 54, 55 and 56.	i) No worker 22) shall be required or allowed to work on shifts

			of longer than 8 hours duration.	continuously.
				ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
Milk Diaries	64(2) (e) for work which for technical reasons must be carried on bechilling process	All work of receiving	51, 52, 54, 55 and 56. or allowed to work on shifts	i) No worker shall be required 23)

	of milk by pasturisation,		of longer than 8 hours duration.	continuously.
		storage, storage bottling and packing of milk.		ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
24) Oil tank installations	64(2) (e) for work which for technical reason must be carried on	a) Work performed by workers in connection	51, 52, 54, 55 and 56.	i) No worker shall be required or allowed to work on shifts of longer than 8

	continuously.	with pumping operations. b) Work performed by furnacemen and firemen. c) Work performed by safety operators.		hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
25) Oxygen factories.	64(2) (e) for work which for technical reason must be carried on	Engine and plant drives, oilers the filling the	51, 52, 54, 55 and 56.	i) No worker shall be required or allowed to work on shifts of longer than 8

	continuously.	cylinders.		hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
Paper, card-board and strawboard factories.	64(2) (e) for work which for technical reason must be carried on continuously.	Work performed on choppers digestor, kneeders,	51, 52, 54, 55 and 56.	i) No worker 26) shall be required or allowed to work on shifts of longer than 8 hours duration.

		stainers, and washers, beaters, paper making machines, pumping plants reelers and cutters.		ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
27)Pharmaceutical factories	64(2) (e) for work which for technical reason must be carried on continuously.	All continuous process operations in chemical plants.	51, 52, 54, 55 and 56.	i) No worker shall be required or allowed to work on shifts of longer than 8 hours duration. ii) Intervals for

				food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
Phonograph Disc manufacturing factories	64(2) (e) for work which for technical reason must be carried on	Work performed in matrix Department. of longer than 8 hours duration.	51, 52, 54, 55 and 56. continuously.	i) No worker 28) shall be required or allowed to work on shifts

				ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
Potassium Chlorate factories.	64(2) (e) for work which for technical reason must be carried on	Work in the cell room.	51, 52, 54, 55 and 56.	i) No worker 29) shall be required or allowed to work on shifts of longer than 8 hours duration. continuously.

				ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
Public electricity supply factories generating	64(2) (e) for work which for technical reason must be carried on and auxiliaries continuously.	Operation and maintenance of prime mover generators,	51, 52, 54, 55 and 56.	i) No worker 30) shall be required or allowed to work on shifts of longer than 8 electricity in any hours duration.

manner and those switch generating electricity in any manner.		transformers ii) Intervals for engine rooms and food and rest boiler shall be given to departments engines and boilers and their auxiliaries.	and gears, also all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
Public pumping and compressor	64(2) (d) for work which for technical reason must be	51, 52, 54, 55 and 56.	i) No worker 31) shall be required or allowed to work on shifts

stations.	carried on continuously.			of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
Rubber Tyre Rubber factories.	64(2) (e) for work which for technical reason must be on	All work on curing process of rubber	51, 52, 54, 55 and 56.	i)No worker 32) shall be required and or allowed to work on shifts carried

			of longer than 8 hours duration.	continuously.
				ii)Intervals for food and rest shall be given to all workers allowed to work on such work. iii)Provisions of rules 142 shall be compiled with. iv)Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v)In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
Silver refineries	64(2) (d) for work which for technical reason must be	All work	51, 52, 54, 55 and 56.	i) No worker 33) shall be required or allowed to work on shifts

	carried on continuously.			of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
34) Soap factories.	64(2) (e) for work which for technical reason must be carried on	a) All continuous process work in continuous	51, 52, 54, 55 and 56.	i) No worker shall be required or allowed to work on shifts of longer than 8

	continuously.	soap making plants. b) All continuous process work in synthetic detergent plants including cartoning and packing carried out in a continuous chain.		hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
Sodium and Potassium bicarbonate factories.	64(2) (d) for work which for technical reason must be	Work in furnace and crystallisers	51, 52, 54, 55 and 56.	i) No worker 35) shall be required or allowed to work on shifts

	carried on continuously.			of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
Starch Factories.	64(2) (e) for work which for technical reason must be carried on	All work except the engineering Department	51, 52, 54, 55 and 56.	i) No worker 36) shall be required or allowed to work on shifts

		of longer than 8 hours duration.	continuously.	and workshops. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
Sugar Factories.	64(2) (d) for work which for technical reason must be carried on	Operations beginning with receiving and weighment of	51, 52, 54, 55 and 56.	i) No worker 37) shall be required or allowed to work on shifts

		of longer than 8 hours duration.	continuously.	sugarcane and
		ending with bagging of sugar.		ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
38) Vegetable Oil hydrogenation	64(2) (e) for work which for technical reason must be	The work, viz. refining, bleaching,	51, 52, 54, 55 and 56.	i) No worker shall be required or allowed to work on shifts

factories.	carried on continuously.	filtering, generation in of hydrogenating and deodorisng processes, also compression of oxygen and the cylinder filling.		of longer than 8 hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
39) Factories having effluent Treatment plant	64(2) (d) for work which for technical reason must be carried on	All continuous process work.	51, 52, 54, 55 and 56.	i) No worker shall be required or allowed to work on shifts of longer than 8

		continuously.			hours duration. ii) Intervals for food and rest shall be given to all workers allowed to work on such work. iii) Provisions of rules 142 shall be compiled with. iv) Compliance with section 53 shall be made in such way that such worker shall be allowed not less than two holidays in each period covered by four consecutive statutory holidays under section 52(1). v) In the absence of a worker who has failed to report for duty a shift worker may be allowed to work the whole or part of the subsequent shift provided that next shift of that worker shall not commence before a period of 16 hours has elapsed after the specified stopping time of the shift to which he belongs.
XI	1) All Cotton ginning factories.	64(2) (b) for work in the nature of preparatory of complementary work and	Work performed by Gin Fitters Machines and Oilers.	51, 52, 54, 55, 56 and 61.	All the five conditions in X(i). Register or Muster Roll required to be maintained

		64(2) (f) for work carried out during fixed seasons and section 64(3) for consequential exemption from section 61.			under section 62 shall show correctly full particulars of periods within which each such worker may be required to work; Entries in the register or Muster roll shall be up-to-date.
XII	1) Pottery woks	64 (2) (d) for work of continuous nature.	Work performed by Sin Fitters, Machine and Oilers.	52 and 55	All the conditions as in VII
XIII	1) Gur(Jaggery) Factories	64 (2) (b) for work in the nature of Preparatory or complimentary work and 64(2)	All work	51, 54,55 an 56	All the conditions as in VIII
XIV	1) News printing Process	64(2) (1) for work in printing of Newspaper which is held up due to breakdown of machinery.	a) All works on daily/ weekly News papers	51, 54, 55 and 56	a) No worker shall be allowed to work for more than 56 hours in any week. b) No overtime shall be carried on except for two days prior to the date of publication of the weekly newspaper. c) The exemption under this entry shall be availed of only in that section of the press where there is breakdown of machinery and d) Intervals for food and rest shall be given to all workers allowed to work

					on such work.
XV	i) All factories	64(2) (K) for work notified by the state Government work of National importance.	Workers engaged in any work which is noticed by the state Government in the Official Gazette, as work of National Importance.	51,52, 54, 55 and 56	All the conditions as in X (1) except condition No. as (V)

Explanation: -

1.The Following shall be considered to be urgent repairs: -

a)repairs to any part of the machinery, plant or structure of a factory which are of such a nature that delay in their execution would involve danger to human life or safety or the stoppage of manufacturing process;

b)breakdown repairs to the motive power, transmission or other essential plant of other factories, collieries, railways, dockyards, harbours, tramways, motor transport, gas electrical generating and transmission, pumping or similar essential or public utility services carried out in general engineering works and foundries and which are necessary to enable such concerns to maintain their main manufacturing process, production or services during normal working hours;

c)repairs to deep-sea ships and repairs to commercial aircraft done in a factory which are essential to enable such ships or aircraft to leave port at proper time or continue their normal operations in a sea-worthy or air-worthy condition, as case may be; and

d)repairs in connection with a charge of motive power, for example, from steam to electricity or vice versa, when such work cannot possibly be done without stoppage of the normal manufacturing process.

2)Periodical cleaning is not included in the terms “examining” or “repairing”.

Chapter VII
Employment of Young Persons

146Exemption of Certain Adult Workers
147The Register of Child Worker

Prescribed under Sec 72(3)

Rule 146. Notice of Periods of Work for Children

The notice of periods of work for child workers shall be in

Form 23.

Prescribed under Sec 73(2)
Rule 147. The Register of Child Worker
The Register of Child Workers shall be in

Form 24. This register shall be written up afresh each year and shall be preserved for a period of five years.

Chapter VIII

Annual Leave with Wages

148	148Leave with Wages Register
149	Leave Book
150	Medical Certificate
151	151Notice of Inspector of Involuntary Unemployment
152	Notice by Worker
153	153Grant of Leave with Wages
154	154Mode of Computation of Cash Value of Wages
155	155Payment of wages if the Worker Dies
156	156Notice to Inspector of Lay Off
157	Notice by Manager
158	158Register to be maintained in case of Exemption under Section 84
159	159Exemption of Certain Factories

Chapter VIII

Annual Leave with Wages

Prescribed under Sec

Rule 148. Leave with Wages Register

1)The manager shall keep a Register in

Form 25 herein after called the Leave with Wages Register:

Provided that if the Chief Inspector is of opinion that any muster roll or register maintained as part of the routine of the factory, or return made by the manager, gives in respect of any or all of the workers in the factory, the particulars required for the enforcement of Chapter VIII of the Act, he may, by order in writing, corresponding extent, be maintained in place of and be treated as the register or return required under this Rule in respect of that factory.

2)Leave with Wages Register shall be preserved for a period a period of five years after the last entry in it and shall be produced before the Inspector on demand.

Rule 149. Leave Book

1)The manager shall provide each worker who has become entitled to leave during calendar year, with a book in

Form 26 (hereinafter called the leave book) not later than 31st January of the following year. The leave book shall be the property of the worker and the manager or his agent shall not demand it, except to make entries of the dates of holidays or interruptions in service, and shall not keep it for more than a week at a time:

Provided that, in case of a worker who is discharged or dismissed from service during the course of the year, i.e. who is covered by subsection (3) of sec 79 of the Act, the manager shall issue an abstract from the "Register of Leave with Wages" (Form 25)within a week from the date of discharge pr dismissal as the case may be.

2)If a worker loses his leave Book, the manager shall provide him with another copy on payment of fifty paise within fifteen days, and shall complete it from his record.

Rule 150. Medical Certificate

If any worker is absent from work due to his illness and he wants to avail himself of the leave with wages due to him to cover the period of illness as provided under sub-section (7) of Section 79, he shall, if so required by the manager produce a medical certificate signed by a registered medical practitioner or by a registered or recognised Vaid or Hakim stating the cause of the absence and the period for which the worker is, in the opinion of such medical practitioner, Vaid or Hakim, unable to attend to his work.

Rule 151. Notice of Inspector of Involuntary Unemployment

The manager shall give, as soon as possible, a notice to the Inspector of every case of involuntary unemployment of workers, giving numbers of unemployed and the reasons for their unemployment. Entries to this effect shall be made in the register of leave with wages and the leave book in respect of each worker concerned.

Rule 152. Notice by Worker

Before or end of the calendar year, a worker may give notice to the manager of his intention not to avail himself of the leave with wages due during the following calendar year. The manager shall make an entry to that effect in the leave with wages register and in the leave book of the worker concerned.

Rule 153. Grant of Leave with Wages

1)Whenever leave with wages is given to any worker, necessary entries shall be made in the leave with wages register and the leave book of the worker concerned. 2)As far as circumstances permit, members of the same family comprising husband, wife and children shall be allowed leave at the same time.

3)A worker may exchange the period of his leave with another workers subject to the approval of the manager.

Rule 154. Mode of Computation of Cash Value of Wages

1)The cash equivalent of the advantage accruing through the concessional sale of food grains and other articles payable to workers proceeding on leave shall be the difference between the value of the average market rate prevailing during the month immediately preceding his leave and the value at the concessional rates allowed of foodgrains and other article he is entitled to.

2)For the purpose of the cash equivalent, monthly average marker rate of food grains and other articles shall be computed at the end of every month.

Rule 155. Payment of wages if the Worker Dies

If a worker dies before he resumes work, the balance of his pay, due for the period of leave, shall be paid to his nominee within the week of the receipt of intimation of death of the worker.

For this purpose each worker shall submit a nomination in Form 27 duly signed by himself and attested by two witness. The nomination shall remain in force until it is cancelled or revised by another nomination.

Rule 156. Notice to Inspector of Lay Off

The manager shall give, as soon as possible, a notice to the Inspector of every case of lay off of workers by agreement or contract or as permissible under the standing orders, giving the number of such workers and the reasons for the lay off. Entries to this effect shall be made in the leave with wages register and the leave book in respect of each worker concerned.

Rule 157. Notice by Manager

The manager shall cause a notice to be displayed giving the names of all workers whose leave, which has been carried forward has reached the maximum limit allowed under the first proviso to subsection (5) of section 79, as soon as possible in the first quarter of each calendar year the notice shall state that no further leave carried forward and that application for leave shall be made with one month from the date of the notice. A copy of the notice shall be given to each worker concerned. A copy shall also be delivered at the office of the Inspector.

Rule 158. Register to be maintained in case of Exemption under Section 84

1)Where an exemption is granted under Section 84, the manager shall maintain a register showing the position of each worker as regard leave due, leave taken and wages granted.

2)He shall display at the main entrance of the factory, a notice giving full details of the system established in the factory for leave with wages and send a copy of it to the Inspector.

3)No alteration shall be made in the scheme approved by the State Government at the time of granting exemption under section 84 without its previous sanction.

Rule 159. Exemption of Certain Factories

The Chief Inspector may grant exemption from all or any of the provisions of Rule 153 to 162 in respect of all or any of the workers in any factory subject to such conditions as he may impose.

Chapter IX
SPECIAL PROVISION

Rules	Description
Rule 160	**Dangerous operation**

Schedule I	**Manufacture of aerated water and processes incidental thereto**

Schedule II	Electrolytic plating or oxidation of metal articles

Schedule III	Manufacture and repair of electric accumulators

Schedule IV	Glass Manufactures

Schedule V	**Grinding or Glazing of materials and processes incidental thereto**

Schedule VI	**Manufacture and treatment or lead and certain lead Compounds of Lead**

Schedule VII	Generation of gas from Dangerous Petroleum as defined in the Petroleum Act, 1934

Schedule VIII	Cleaning or smoothening, roughening etc of articles

Schedule IX	**Liming and tanning of raw hides and skins and processes incidental thereto**

Schedule X	Manufacture of chromic acid or manufacture or recovery of the bichromate of sodium potassium or ammonium

Schedule XI	Manufacture or manipulation of Nitro or Amino compounds

Schedule XII	Handling and manipulation of corrosive substances.

Schedule XIII	**Manufacturing of bangles and other articles from cinematograph film and toxic inflammable solvents**

Schedule XIV	Processes involving manufacture, use or evolution or carbon disulphide and hydrogen sulphide

Schedule XV	Manufacture and manipulation of dangerous pesticides

Schedule XVI	**Compression of Oxygen and Hydrogen Produced by Electrolytic Process or by Steam iron process.**

Schedule XVII	**Handling and processing of Asbestos, Manufacture of any Article of Asbestos and any other process of manufacture or otherwise in which Asbestos is used in any form.**

Schedule XVIII	Manufacture or Manipulation of Manganese and its Compound

Schedule XIX	Carbon di-Sulphide Plants

Schedule XX	Benzene

Schedule XXI	**Process of extracting oils, wax and fats from vegetable and animal sources in Solvent Extraction Plants**

Schedule XXII	**Manufacture or Manipulation of Carcinogenic Dye Intermediates**

Schedule XXIII	**Highly Flammable Liquids and Flammable compressed Gases**

Schedule XXIV	Operations involving High Noise Level

Schedule XXV	Manufacture and manipulation of dangerous pesticides

Schedule XXVI	**Manipulation of stone or any other material containing free silica**

Schedule XXVII	Fire Works Manufacture and Match Factories

Schedule XXVIII	**Composing, Printing, Binding and Processes and/or Operations incidental thereto**

Schedule XXIX	Processing of Cashew nut

Schedule XXX	**Printing presses and type foundries and certain lead processes carried therein**

Schedule XXXI	Manufacture of pottery

Schedule XXXII	**Operation in Foundry**
Rule 161	**Notification of accidents or dangerous occurrences**
Rule 162	**Notice of Poisoning or Disease**
Rule 163	**Procedures in appeals**
Rule 164	**Display of notices**
Rule 165	**Returns**
Rule 166	**Service of notices**
Rule 167	**Information required by the Inspector**
Rule 168	**Registers/records to be produced on demand to the Inspector.**
Rule 169	**Permissible levels of certain chemical substances in work environment**
Rule 170	**Muster roll**
Rule 171	**Register of accidents and dangerous occurrences**
Rule 172	**Maintenance of inspection book:**
Rule 173	**Information regarding closure of factories**
Rule 174	**Power to Cancel the Licence and Registration upon receipt of report:**
Rule 175	**Preservation of Records**
Rule 176	**Manner of Destruction for Records**
Rule 177	**Language in the Registers and records**
Rule 178	**Exhibition of Name Board**
Rule 179	**Power of Exemption**

Rules prescribed under Section 87

Rule 160. Dangerous operation

1)The following operations when carried on in any factory are declared to be dangerous operations under Section 87

1)Manufacture of aerated water and processes incidental thereto.

2)Electrolytic plating or oxidation of metal articles by use of an electrolyte containing acids, bases or salts of metals such as chromium, nickel, cadmium, zinc, copper, silver, gold etc.

3)Manufacture and repair of electric accumulators.

4)Glass manufacture.

5)Grinding or glazing or metals.

6)Manufacture and treatment of lead and certain compounds of lead.

7)Generation of gas from dangerous petroleum as defined in clause (b) of section 2 of the Petroleum Act, 1934.

8)Cleaning or smoothing of articles by a jet of sand, metal shot or grit or other abrasive propelled by a blast of compressed air or steam.

9)Liming and tanning of raw hides and skins and processes incidental thereto.

10)Manufacture of chromic acid or manufacture or recovery of the bicromate of sodium, potassium or ammonium.

11)Manufacture or manipulation of nitro or amino compounds.

12)Handling and manipulation of corrosive substances.

13)Manufacture of bangles and other articles from cinematograph film and toxic and inflammable solvents.

14)Process involving manufacture use or evolution of carbon disulphate and hydrogen sulphide.

15)Manufacture and manipulation of dangerous pesticides.

16)Compression of oxygen and hydrogen produced by electrolytic.

17)Manufacture and manipulation of asbestos.

18)Manufacture and manipulation of manganese and its compounds.

19)Carbon-di-sulphide plants.

20)Benzene.

21)Process of extracting oils, wax and fats from vegetable and animal sources in Solvent Extraction Plant.

22)Manufacture or manipulation of Carcinogenic Dye Intermediates.

23)Highly Flammable liquids and Flammable compressed Gases

24)Operations Involving High Noise levels.

25)Chemical Involving High Noise Levels.

26)Manipulation of Stone or any other Material containing free Silica.

27)Fire Works factories and Match Factories.

28)Composting, Printing, Binding and Processes and/or Operations Incidental thereto.

29)Processing of Cashew nut

30)Printing process and type foundries and certain lead processes carried therein.

31)Manufacture of Pottery.

32)Operation in Foundries.

2)The provision specified in the Schedules annexed hereto shall apply to any class or description of factories wherein dangerous operations specified in each Schedule are carried.

3)"First Employment" means employment for the first time in a hazardous process or operation so notified under Section 87, or reemployment therein after cessation of employment in such process or operation for a period exceeding 3 (three) calendar months.

4) a) For the medical examination of workers to be carried out by the certifying surgeon as required by the schedule annexed to this rule, the occupier of the factory shall pay fees at the rate of Rs. 25/- per examination of each worker every time he is examined.

b)The fees prescribed in sub-rule (4) (a) shall be exclusive of any charges for biological, radiological or other tests which may have to be carried out in connection with the medical examinations. Such charges shall be paid by the occupier.

c)The fees to be paid for medical examination shall be paid under head of account "0230 Labour & Employments – 104 - fees realised under the Factories Act" and submit original treasury challan to the office of the respective Inspector of factories.

5)Notwithstanding the provision specified in the schedule annexed to this Rule, the Inspector may by issue of orders in writing to the manager or occupier or both, direct them to carry out such measures, and within such time, as may be specified in such order with a view to removing conditions dangerous to the health of the workers, or to suspend any process, where such process constitutes, in the opinion of the Inspector, imminent danger of poisoning or toxicity.

6)Any register or record of medical examinations and tests connected therewith required to be carried out under any of the schedules annexed hereto in respect of any worker shall be kept readily available to the Inspector and shall be preserved till the expiry of one year after the worker ceases to be in employment of the factory.

Schedule I

Manufacture of aerated of water and processes incidental thereto

1)Fencing of machines – All machines for filling bottles or siphons shall be so constructed, placed or fenced as to prevent, as far as may be practicable, a fragment of a bursting bottle or siphon from striking any person employed in the factory.

2)Face guards and gauntlet -

1)The occupier shall provide and maintain in good condition for the use of all person engaged in filling bottles or siphon –

a)suitable face-guards to protect the face, neck and throat, and

b)suitable gauntlets for both arms to protect the whole hand and arms;

Provided that

i)paragraph 2(1) shall not apply where bottles are filled by means of an automatic machine so constructed that no fragment of a bursting bottle can escape, and

ii)where a machine is so constructed that only one arm on the bottle at work upon ir is exposed to danger, a gauntlet need not be provided for the arm which is not exposed to danger.

3)The occupier shall provide and maintain in good condition for the use of all persons engaged in corking, crowning, and screwing, wiring, foiling, capsuling, sighting or labelling bottles or siphon -

a) suitable face-guards to protect the face, neck and throat, and

b) suitable gauntlets for both arms to protect the arms and at least half of the palm and the space between the thumb and forefinger.

4)Wearing of face guards and gauntlets – All persons engaged in any of the processes specified in paragraph 2 of this schedule shall, at work in such process, wear the face-guards and gauntlets provided under the provisions of the said paragraph.

Schedule II

Electrolytic plating or oxidation of metal articles by use of an electrolytes containing acids, bases or salts of metals such as chromium, nickel, cadmium, zinc, copper, silver, gold etc.

1)Definitions: - For the purpose of this schedule –

a)"Electrolytic process" means the electrolytic planting or oxidation of metal article by the use of an electrolyte containing acids, bases or salts of metal such as chromium, nickel, cadmium, zinc, copper, silver, gold etc.

b)"Bath" means any vessel used for an electrolytic chromium process or for any subsequent process,

c)"Employed" means any process involving contact with liquid from a bath.

d)"Suspension" means suspension from employment in any process involving contract with liquid from any bath by written certificates in the Health Register, signed by the certifying surgeon, who shall have power of suspension as regards all persons employed in any such process.

2)Exhaust draught: -An efficient exhaust draught shall be applied to every vessel in which an electrolytic process is carried on. Such draught shall be provided by mechanical means and operate on the vapour or spray given off in the process as near as may be at the point of origin. The exhaust draught appliance shall be so constructed, arranged and maintained as to prevent the vapour or spray entering into any room or place in which work is carried on.

3)Prohibition relating to women and young persons: - No woman, adolescent or child shall be employed or permitted to work at a bath.

4)Floor of work rooms: - The floor of every room containing a bath shall be impervious to water. The floor shall be maintained in good and level condition and shall be washed down at least once a day.

5)Protective clothing: -

1)The occupier of the factory shall provide and maintain in good and clean condition the following articles of protective clothing for the use or all persons employed on any process at which they are liable to come in contact with liquid from a bath and such clothing shall be worn by the person concerned: -

a)water-proof aprons and bibs, and

b)for persons actually working at bath, loose-fitting rubber gloves and rubber boots or other water-proof footwear and chemical goggles.

2)The occupier shall provide and maintain for the use of all persons employed suitable accommodation for the storage and adequate arrangements for the drying of the protective clothing.

6)Medical requisites: - The occupier shall provide and maintain a sufficient supply of suitable ointment and impermeable water-proof plaster in a separate box readily accessible to the workers and used solely for the purpose of keeping the ointments and plaster.

7)Medical Examination: -

1)Every person employed in electrolytic process, shall be examined by a certifying surgeon within 30 days of his first employment in the said process and if found fit, shall be granted by the certifying surgeon a certificate of fitness in

Form 28. Such examination shall include X-ray of the chest and -

a)in case of chromium plating include examination for nasal septum perforation and test for chromium in urine;

b)in case of nickel plating, test for nickel in urine; and

c)in case of cadmium plating, test for cadmium in urine and micro globulin in urine.

2)No worker shall be employed in any electrolytic process unless certified fit for such employment by the Certifying Surgeon.

3)Every worker employed in the electrolytic process shall be re-examined by a Certifying Surgeon at least once in every year, except in case of the workers employed in cadmium, chromium and nickel plating processes for whom this examination shall be carried out once in every six months. Such re-examination shall, wherever the Certifying Surgeon considers appropriate, include tests as specified under sub-paragraph 1 excluding the X-ray of the chest which shall not be required normally to be carried out earlier than once in three years.

4)The Certifying Surgeon after examining a worker shall issue a Certificate of Fitness in

Form 28. The record of examination and re-examinations carried out shall be kept in the custody of the manager of the factory. The record of each examination carried out including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 29.

5)The certificate of fitness and the health register shall be kept readily available for inspection by the Inspector.

6)If at any time the Certifying Surgeon is of the opinion that a worker is no longer for employment in the electrolytic process on the ground that continuance therein would involve danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of the his findings in those documents should also include the period for which he considers that the said person is unfit for work in the said processes. The person declared unfit in such circumstances shall be provided with alternate placement facility unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the person affected shall be suitably rehabilitate.

7)No person who has been found unfit to work as said sub-paragraphs (6) shall be re-employed or permitted to work in the said process unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.

8)Chief Inspector of Factories is of the opinion that conditions of work in the said process are unsatisfactory, he may, by order in writing, require the manager of the factory to have the person employed in the said process medically examined by a certifying surgeon at more frequent intervals.

8)Cautionary placard: - A cautionary placard in the form specified below and printed in the language of the majority of the workers employed shall be affixed in a prominent place in the factory where it can be easily and conveniently read by the workers.

Cautionary Notice

Electrolyting process

1)Chemicals handled in this plant are corrosive and poisonous.

2)Smoking, chewing tobacco, eating food or drinking, in this area is prohibited. No food stuff or drink shall be brought in this area.

3)Some of these chemicals may be absorbed through the skin and may cause poisoning.

4)A good wash shall be taken before meals.

5)Protective devices supplied shall be used while working in this area.

6)Spillage of the chemicals on any part of the body or on the floor shall be immediately washed away with water.

7)All workers shall report for the prescribed medical tests regularly to protect their own health.

8)Weekly examination: -

a)The occupier of every factory shall appoint a qualified medical practitioner, whose appointment shall be subject to confirmation by the Chief Inspector.

b)No person shall be employed in electrolytic process unless he has been examined and found fit for employment in the said process by the qualified medical practitioner. Such examination shall include inspection of hands, forearms and nose and will be carried out at intervals, of not more than one week. The results of such examination shall be maintained in a Health Register in

Form 29. The register shall be kept by the manager and shall contain the names of all the persons employed in the said process and the certificate of fitness in respect of each person issued by the certifying surgeon and the certificates shall be attached thereto.

c)If at any time, the registered medical practitioner is of opinion that nay person is no longer fit for employment in the electrolytic process, he shall make a record of his findings in the health register and intimate the manager in writing that the said person is unfit for work in the said process.

d)A person so found unfit by the registered medical practitioner shall be sent by the manager to the certifying surgeon with report from the registered medical practitioner. The certifying Surgeon, after examination may suspend the said person from working in the said process. No person, after suspension shall be employed without written sanction from the certifying surgeon nor his name entered in or the certificate attached to the health register.

9)Water facilities:

1)There shall provided and maintained in good repairs for the use of all persons employed in electrolytic process and processes incidental to it – a)a wash place under cover, with either –

i)a through with a smooth impervious surface filled with a waste pipe, and of sufficient length to allow at least 60 cms for every 5 persons employed at any one time, and having a constant supply of water from taps or jets above the trough at interval of not more than 60 cms., or

ii)at least one wash basin for every five such persons employed at one time, fitted with a waste pipe and having a constant supply of water laid on.

b)a sufficient supply of clean towels renewed daily, and soap or other suitable cleaning material.

2)In addition to the facility in sub-paragraphs (1), an approved type of emergency shower with eye fountain shall be provided and maintained in good working order. Whenever necessary, in order to ensure continuous water supply, storage tank of 1500 litres capacity shall be provided as a source of clean water for emergency use.

Schedule III

Manufacture and Repair of Electric Accumulators

1)Savings: - This schedule shall not apply to the manufacture or repair of electric accumulators or parts thereof not containing lead or any compound of lead, or to the repair on the premises, of any accumulator

forming part of a stationary battery.

2)Definitions: - For the purposes of this schedule -

a)"Lead process" means the melting of lead or any material containing lead casting, pasting, lead burning, or any other work, including trimming or any other abrading or cutting of pasted plates, involving the use, movement or manipulation of, contact with any oxide of lead.

b)"Manipulation of raw oxide of lead" means any lead process involving any manipulation or movement of raw oxides of lead other than its conveyance in a receptacle or by means of an implement from one operation to another.

c)"Suspension" means suspension form employment in any lead process by writing certificates in the Health Register, From 29 signed by the Certifying Surgeon, who shall have power of suspension as regards all persons employed in any such process.

3)Prohibition relating to women and young persons: - No women or young person shall be employed or permitted to work in any lead or pasting is carried on.

4)Separation of certain processes: - Each of the following process shall be carried on in such a manner and under such conditions as to secure effectual separation from one another and other process: -

a)Manipulation of raw oxide of lead.

b)Pasting;

c)Drying of pasted plates;

d)For with lead burning ("tacking") necessary carried on in connection therewith;

e)Melting down or pasted plates;

f)The grid casting shop.

5)Air Space: - In every room in which a lead process is carried on, there shall be at least 15 cubic metres of air for each person employed therein, and in computing this air space no height over 3.5 metres shall be taken into account.

6)Ventilation: - Every workroom shall be provided with inlets and outlets of adequate size as to secure and maintain efficient ventilation in all parts of the room.

7)Distance between workers in pasting room: - In every pasting room the distance between centre of the working position of any plaster and that of the plaster working nearest to him shall not be less than 150 centimetres.

8)Floor of work-rooms: -

1)The floor of every room in which a lead process in carried on shall be–

a)of cement or similar material so as to be smooth and impervious to water;

b)maintain in sound condition;

c)kept free from material, plant, or other obstruction not required for, or produced in, the process carried on in the room.

2)In all such rooms other than grid casting shops the floor shall be –

d)cleansed daily after being thoroughly sprayed with water at a time when no other work is being carried on in the room.

3)In grid casting shops the floor shall be cleaned daily.

4)Without prejudice to the requirements of sub-paragraphs (1), (2) and (3) where manipulation of raw oxide of lead or pasting in carried on, the floor shall also be –

a)kept constantly moist while work is being done;

b)provided with suitable and adequate arrangements for drainage;

c)thoroughly washed daily by means of a hose pipe.

9)Work-benches: - The work-benches at which any lead process is carried on shall: -

a)have a smooth surface and be maintained in sound condition;

b)be kept free from all materials or plant not required for a produced in, the process carried on thereat;

and all such work-benches other than those in grid casting shops shall –

c)be cleaned daily either after being a thoroughly damped or by means of a suction cleaning apparatus at a time when no other work is being carried on thereat;

and, all such work-benches in grid casting shops shall –

d)be cleansed daily;

and every work bench used for pasting shall-

e)be covered throughout with sheet lead or other impervious material;

f)be provided with raised edges;

g)be kept constantly moist while pasting is being carried on; and every work-bench used for trimming, brushing, filing or any other abrading or cutting or pasting containing water.

h)be fitted with a top having opening or grill which shall allow any clippings, filling, or dust produced to fall into a collecting trough containing water.

10)Exhaust draught: - The following processes shall not be carried on without the use of efficient exhaust draught: -

a)Melting of lead or materials lead;

b)Manipulation of raw oxide of lead, unless done in an enclosed apparatus so as to prevent the escape of dust into the work-room;

c)Pasting;

d)Trimming, brushing, filing or any other abrading or cutting of pasted plates giving rise to dust;

e)Lead burning other than -

i)“tacking” in the formation room;

ii)chemical burning for the making of lead linings for cell cases necessarily carried on in such a manner that the application of efficient exhaust is impracticable.

Such exhaust draught shall be effected mechanical means and shall operate on the dust or fume given off as nearly as may be at its point of origin, so as to prevent it from entering the air of any room in which persons work.

11)Fumes and gases from melting pots: - The products of combustion produced in the heating of any melting pot shall not be a allowed to escape into a room in which persons work.

12)Container for dross: - A suitable receptacle with tightly fitting cover shall be provided and used for dross as it is removed from every melting pt. Such receptacle shall be kept covered while in the work room, except when dross is being deposited therein.

13)Container for lead waste: - A suitable receptacle shall be provided in every work-room in which old plates and waste material which may give rise to dust shall be deposited.

14)Racks and shelves in drying room: - The racks or shelves provided in any drying room shall not be more than 240 centimetres from the floor not more than 60 centimetres in width; provided that as regards racks or selves set or drawn from both sides, the total width shall not exceed 12 centimetres.

Such racks or selves shall be cleaned only after being thoroughly damped unless an efficient suction cleaning apparatus is used for this purpose.

15)Medical examination: -

a)Every person employed in a lead process shall be examined by the Certifying Surgeon within seven days preceding or following the date of his first employment in such process and thereafter shall be examined by the Certifying Surgeon once in every calendar month, or at such other intervals as may be specified in writing by the Chief Inspector, on a day of which the notice shall be given to all concerned.

"First employment" means first employment in a lead process in the factory or workshop and also re-employment therein in a lead process following any cessation of employment in such process for a period exceeding three calendar months.

b)A Health Register in Form 29 containing the names of all persons employed in a lead process shall be kept.

c)No person after suspension shall be employed in a lead process without written sanction from the Certifying Surgeon entered in or attached to the Health Register.

15-A. Medical Facilities: -

1)The occupier of the factory shall appoint at least a part-time qualified medical practitioner, possessing MBBS degree and having a post-graduate Diploma in Industrial Health or possessing MBBS degree and having five years experience in industry as occupational health physician. The medical practitioner so appointed shall be required to put in minimum four hours attendance on every working day in the ambulance room for carrying out the duties specified in the following sub-paragraph (2).

Provided that, in cases of factories employing less than 500 workers per day, the Chief Inspector of factories may allow attendance for shorter duration after taking into consideration all the relevant facts of each case.

2)The medical practitioner, so appointed, shall perform the following duties that is to say –

a) to maintain health Register in

Form 29.

b)to undertake medical supervision of persons engaged on dangerous operations specified in Rule 165 of these rules;

c)to look after health, education and rehabilitation of sick, injured or affected workers.

d)to carry out inspection of work-rooms where dangerous operation are carried out and to advise the management in respect of the measures to be adopted for protection of workers involved therein.

3)For the purpose of medical supervision by the medical practitioner so appointed, the occupier shall provide for the former's exclusive use at the factory premises a room which shall be properly cleaned, adequately lighted, ventilated and furnished with a screen, a table and office stationery, chairs and other facilities and instruments including X-raying arrangement for schedules IV, X, XVII for such examinations and such other equipments as may be prescribed by the Chief Inspector of Factories from time to time.

16)Protective clothing: - Protective clothing shall be provided and maintained in good repair for all persons employed in –

a)manipulation of raw oxide of lead;

b)pasting;

c)the formation room;

and such clothing shall be worn by the persons concerned. The protective clothing shall consist of a water-proof apron and manipulation of raw oxide of lead or in pasting head covering. The head coverings shall be washed daily.

17)Mess-room: - There shall be provided and maintained for the use of all persons employed in a lead process and remaining on the premises during the meal intervals, a suitable mess-room, which shall be furnished with (a) sufficient tables and benches, and (b) adequate means for warming food,

18)Cloak-room: - There shall be provided and maintained for the use of all persons employed in a lead process: -

a)a cloak-room for clothing put off during work hours with adequate arrangement, for drying the clothing if wet. Such accommodation shall be separate from any mess-room;

b)separate and suitable arrangements for the storage of protective clothing provided under paragraph 16.

19)Washing facilities: - There shall be provided and maintained in a cleanly state and in good repair for the use of persons employed in a lead process –

a)a wash-place under cover, with either –

i)trough with a smooth impervious surface fitted with a waste pipe without plug, and of sufficient length to allow of atleast 60 centimetres for every five such persons employed at any one time, and having a constant supply of water from tape or jets above the trough at intervals of not more than 60 centimetres; or

ii)a sufficient supply of clean towels made of suitable material renewed daily, which supply, in the case of pasters and persons employed in the manipulation of raw oxide of lead, shall include a separate marked towel for each workers; and

iii)a sufficient supply of soap or other suitable cleansing material and of nailbrushes.

b)There shall, I addition, he provided means of washing in close proximity to the rooms in which manipulation of raw oxide of lead or pasting carried on if required by notice in writing from the Chief Inspector.

20)Time to be allowed for washing: - Before each meal and before the end of the day's work at least 10 minutes, in addition to the regular meal time off shall be allowed for washing to each person who has been employed in the manipulation of raw oxide of lead or in pasting;

provided that if there be one basin or 60 centimetres of trough for each such person this rule shall not apply.

21)Facilities for bathing: - Sufficient bath accommodation to the satisfaction of the Chief Inspector shall be provided for all persons engaged in the manipulation of raw oxide of lead or in pasting, and a sufficient supply of soap and clean towels. 22)Foods, drinks etc. prohibited in workrooms: - No food, drink, pan and supari or tobacco shall be consumed or brought by any worker into any work-room on.

23)Storage of lead oxides: - All bags containing or having contained oxide of lead shall be kept in a closed room used only for this purpose.

24)Re-use of paper or cloth restricted: -

a)Paper once used for backing or drying pasted plates shall not be use again in the factory.

b)Cloth once used for baking or drying pasted plates shall not be stored or handled unless it is moist so as not to give off dust.

Schedule IV

Glass Manufactures

1)Exemption: - If the Chief Inspector is satisfied in respect of any factory or any class or process that, owing to the special methods of work or the special conditions in a factory or otherwise, any of the requirements of this Schedule can be suspended or relaxed without danger to the persons employed therein or that the application of this schedule or any part thereof is for any reason, impracticable, he may by certificate in writing authorise such suspension or relaxation as may be indicated in the certificate for such period and on such conditions as he may think fit.

2)Definitions: - For the purpose of this Schedule –

a)"Efficient exhaust draught" means localised ventilation effected by mechanical means for the removal of gas, vapour, dust or fumes so as to prevent them (as far as practicable) under the atmospheric conditions usually prevailing from escaping into the air of any place in which work is carried on. No draught shall be deemed efficient which fails to remove smoke generated at the point where such gas, vapour, fume or dust originate;

b)"Lead Compound" means any compound of lead other than galena which, when treated in the manner described below, yields to an aqueous solution of hydrochloric acid a quantity of soluble lead compound exceeding when calculated as lead monoxide, five percent of the dry weight of the portion taken for analysis.

The method of treatment shall be as follows: -

A weighed quality of the material which has been dried at 100oC and thoroughly mixed shall be continuously shaken for one hour, at the common temperature with 1,000 times its weight of an aqueous solution of hydrochloric acid containing 0.25 per cent by weight of hydrogen chloride. This solution shall thereafter be allowed to stand for one hour and then filtered. The lead salt contained in the clear filtrate, shall then be precipitated as lead sulphide and weighed as lead sulphate.

c)“Suspension” means suspension from employment in any process specified in paragraph 3 by written certificate in the Health Register in

Form 7 signedby the Certifying Surgeon who shall have power of suspension as regards all persons employed in any such process.

3)Exhaust draught: - The following processes shall not be carried on except under an efficient exhaust draught or under such other conditions as may be approved by the Chief Inspector: -

a)The mixing of raw materials to form a “bath”.

b)The dry grinding, glazing and polishing of glass or any article of glass;

c)All processes in which hydrofluoric acid fumes or ammoniacal vapours are given off;

d)All processes in the making of furnace moulds or “pots” including the grinding or crushing of used “pots”;

e)All processes involving the use of a dry lead compound.

4)Prohibition relating to women and young persons: - No woman or young person shall be employed or permitted to work in any of the operations specified in paragraph 3 or at any place where such operations are carried on.

5)Floor and work-benches: - The floor and work-benches of every room in which a dry compound of lead is manipulated or in which any process is carried on giving off silica dust shall be kept moist and shall comply with the following requirements: -

The floors shall be –

a)of cement or similar materials so as to be smooth and impervious to water.

b)maintained in sound conditions; and

c)cleaned daily after being thoroughly sprayed with water at a time when no other work is being carried on in the room

The work-benches shall: -

a) have a smooth surface and be maintained in sound conditions; and

b)be cleaned daily either being thoroughly damped or by means of a suction cleaning apparatus at a time when no other work is being carried on thereat

6)Use of hydrofluoric acid: - The following provisions shall apply to rooms in which glass is treated with hydrofluoric acid: -

a)There shall be inlets and outlets of adequate size so as to secure and maintain efficient ventilation in all parts of the rooms;

b)The floor shall be covered with gutta-percha and be tight and shall slope gently down to a covered drain;

c)The work-places shall be so enclosed in projecting holes that opening required for bringing in the objects to be created shall be as small as practicable; and

d)The efficient exhaust draught shall be so contrived that the gases are exhausted downwards.

7)Storage and transport or hydrofluoric acid: - Hydrofluoric acid shall not be stored or transported except in cylinders or receptacles made of lead or gutta-percha.

8)Blow-pipes: - Suitable facilities shall be readily available for sterilizing the blowpipes used by the glass-blowers and such blow-pipes shall be sterilized at the beginning of the operation of blowing, each day.

9)Food, drinks, etc., prohibited in work-room: - No food, drink, pan and supari or tobacco shall be brought into or consumed by any worker in any room or work place wherein any process specified in paragraph 3 is carried on.

10)Protective clothing: - The occupier shall provide, maintain in good repair and keep in a clean condition for the use of all persons employed in the processes specified in paragraph 3 suitable protective clothing, footwear, and goggles according to the nature of the work and such clothing, footwear, etc, shall be worn by the persons concerned.

11.Washing facilities: - There shall be provided and maintained in a cleanly state and in good repair for the use of all persons employed in the processes specified in paragraph 3 –

a)a wash-place with either –

i)a trough with a smooth impervious surface fitted with a waste pipe without plug and of sufficient length to allow of at least 60 centimetres for every five such persons employed at any one time, and having a constant supply of water from taps or jets above the trough at interval of not more than 60 centimetres; or

ii)at least one wash basin for every five such persons employed at any one time fitted with a waste pipe and plug and having an adequate supply of water laid on or always readily available;

and

a sufficient supply or clean towels made of suitable materials renewed duly with a sufficient supply of soap or other suitable cleaning material and of nail brushes;

and

a sufficient number of stand pipes with taps – the number and location of such stand pipes shall be to he satisfaction of the Chief Inspector.

12) Medical examination: -

a)Every person employed in any process specified in paragraph 3 shall be examined by the Certifying Surgeon, within seven days preceeding or following the date of his first employment in such process and thereafter shall be examined by the Certifying Surgeon once in every calendar month or at such other intervals as may be specified in writing by the Chief Inspector on a day of which due notice shall be given to all concerned.

b)A Health Register in Form 29 containing the names of all persons employed in any process specified in paragraph 3 shall be kept.

c)No person after suspension shall be employed in any process specified in paragraph 3 without written sanction from the Certifying Surgeon entered in or attached to the Health Register.

13.Medical facilities: -

1)The occupier of the factory shall appoint at least a part time qualified medical practitioner, possessing MBBS degree and having post-graduate diploma in Industrial Health or possessing MBBS degree and having five years experience in industry as occupational health physician. The medical practitioner so appointed shall be required to put in minimum four hours attendance on every working day in the ambulance room for carrying out the duties specified in the following sub-paragraph (2)

Provided that, in cases of factories employing less than 500 workers per day, the Chief Inspector of Factories may allow attendance for shorter duration taking into consideration all the relevant facts of each case.

2)The medical practitioner so appointed, shall perform the following duties that is to say: -

a)to maintain Health Register in Form 29.

b)to undertake medical supervision of persons engaged on dangerous operations are carried out and to advice the management in respect of the measures to be adopted for protection of health of the workers involved therein.

c)to look after health , education and rehabilitation of sick, injured or affected workers;

d)to carry out inspection of work-rooms where dangerous operations are carried out and to advise the management in respect of the measures to be adopted for protection of health of the workers involved therein.

3)For the purpose of medical supervision by the medical practitioner so appointed, the occupier shall provide for the former's exclusive use at the factory premises a room which shall be properly cleaned, adequately lightened, ventilated and furnished with a screen, a table with office stationary, chairs and other facilities and instrument including X-ray arrangements also for Schedule X and XVII for such examinations and such other equipments as may be prescribed by the Chief Inspector from time to time.

Schedule V

Grinding or Glazing of materials and processes incidental thereto

1.Definitions: - For the purpose of this schedule: -

a)"Grindstone" means a grindstone composed of natural or manufactured stand stone but does not include a metal wheel or cylinder into which blocks of natural or manufactured sandstone are fitted.

b)"Abrasive wheel" means a wheel manufactured of blended emery or similar abrasive.

c)"Grinding" means the abrasion, by aid of mechanical power, of metal, by means of grindstone or abrasive wheel.

d)"Glazing" means the abrading, polishing or finishing by aid or mechanical power of metal, by means of any wheel, buff, mop or similar appliance to which any abrading or polishing substance is attached or applied.

e)"Racing means turning up, cutting or dressing or a revolving grindstone before it is brought into use for the first time.

f)"Hacking" means the chipping of the surface of revolving grindstone by the application of a rod, bar or strip of metal to such surface.

g)"Rodding" means the dressing of the surface of a revolving grindstone by the application of a rod, bar or strip of metal to such surface.

2)Exception: -

1)Nothing in this schedule shall apply to any factory in which only repairs are carried on except any part thereof in which one or more persons are wholly or mainly employed in the grinding or glazing of metals.

2)Nothing in this schedule except paragraph 4 shall apply to any grinding or glazing of metals carried on intermittently and at which no person is employed for more than 12 hours in any week.

3)The Chief Inspector may by certificate in writing, subject to such conditions as he may specify therein, relax or suspend any of the provisions of this schedule in respect of any factory if owing to the special methods of work or otherwise such relaxation or suspension is practicable without danger to the health or safety of the persons employed.

3)Equipment for removal of dust: - No racing, dry grinding or glazing shall be performed without: -

a)a hood or other appliance so constructed, arranged, placed, and maintained as substantially to intercept the dust thrown off;

b)a duct of adequate size, air tight and so arranged as to be capable of carrying away the dust, which duct shall be kept free from obstruction and shall be provided with proper means of access for inspection and cleaning and where practicable, with a connection at the end remote from the fan to enable the Inspector to attach thereto any instrument necessary for ascertaining the pressure of air in the said duct; and

c)a fan or other efficient means of producing a draught sufficient to extract the dust;

Provided that the Chief Inspector may accept any other appliances, i.e., the opinion, as effectual for interception, removal and disposal of dust thrown off as a hood, dust and fan would be.

4)Restriction on employment on grinding operations: Not more than one person shall be at any time perform the actual process of grinding, or glazing upon a grindstone, abrasive wheel or glazing appliances.

Provided that this paragraph shall not prohibit the employment of persons to assists in the manipulation of heavy or bulky articles at any such grindstone, abrasive wheel or glazing appliances.

5)Glazing: Glazing or other processes, except processes incidental to wet grinding upon a grindstone shall not be carried on in any room in which wet grinding upon a grindstone is done.

6)Hacking & Rodding: Hacking & Rodding shall not be done unless during the process either (a) and adequate supply of water is laid on at the upper surface of the grindstone or (b) adequate appliances for the interception of dust are provided in accordance with the requirements of paragraph 3.

7)Examination of Dust Equipment:

a)All equipment for the extraction or suppression of dust shall at-least once in every six months be examined and tested by a competent person, and any defect disclosed by such examination and test shall be rectified as soon as practicable.

b)A register containing particulars of such examination and tests shall be kept in a Form approved by the Chief Inspector.

8)Medical facilities and record of examinations and tests: -

1)The occupier of every factory in which grinding or glazing of metals are carried out, shall –

a)employ a qualified medical practitioner for medical surveillance of the workers employed therein whose appointment shall be subject to the approval of the Chief Inspector; and

b)provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (a).

2)The record of medical examinations are appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.

9)Medical examination by Certifying Surgeon: -

1)Every worker employed in grinding or glazing of metal and processes incidental thereto shall be examined by a Certifying Surgeon within 15 days of his first employment. Such examination shall include pulmonary function tests and in suspected cases chest X rays. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified for such employment by Certifying Surgeon.

2)Every worker employed in the said processes shall re-examined by a Certifying Surgeon at least once in every 12 calendar months. Such re-examintion shall, wherever the Certifying Surgeon considers approximate, include tests as specified in sub-paragraph (1).

3)The Certifying Surgeon after examining a worker, shall issue & Certificates of Fitness in

Form 28. The record of examination and re-examinations carried out shall be entered in the Certificate and the Certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (1) and (2), including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 29.

4)The Certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.

5)If at any time the Certifying Surgeon is of the opinion that a worker is no longer fir for employment in the said processes on the ground that continuance therein would involve special danger to the health of the
worker, he shall make a record of his findings in those documents should also include the period for which he considers that the said person is unfit for work in the said processes. The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapiciated in the opinion of the Certifying Surgeon, in which case the person affected shall be suitably rehabilitated.

6)No person who has been found unfit to work as said in sub-paragraph (5) shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.

10)Exemption: - The Chief Inspector may by certificate in writing, subject to such conditions as he may specify therein, relax or suspend any of the provisions of this schedule in respect of any factory if owing to the special methods of work or otherwise such relaxation or suspension is practicable without danger to the health or safety of the persons employed.

Schedule VI

Manufacture and treatment or lead and certain lead Compounds of Lead

1)Examination: Where the chief Inspector is satisfied that all or any of the provision of this schedule are not necessary for the protection of the persons employed he may by certificate in writing exempt any factory from all or any f such provision, subject to such conditions as he may specify therein.

2)Definition: - For the purpose of this schedule: -

a)"Lead Compound" means any compound of lead other than galena which, when treated in the manner described below, yields to an aqueous solution of hydrochloric acid, quantity of soluble lead compound exceeding when calculated as lead monoxide, five percent of the dry weight of the portion taken for analysis, in the case of paints and similar products and other mixtures containing oils or fat the "dry weight" means the dry weight of the material remaining after the substance has been thoroughly mixed and treated with suitable solvents to remove oil, fats, varnish or other media.

The method of treatment shall be as follows: -

A weighted quantity of the material which has been dried at 100oC and thoroughly mixed shall be continuously shaken for one hour, at the common temperature with 1,000 times its weight of an aqueous solution of hydrochloric acid containing 0.25% by weight of hydrogen chloride. This solution shall thereafter be allowed to stand for one hour and then filtered.

The Lead salt contained in the clear filtrate shall then be precipitated as lead sulphide and weighed as lead sulphate.

b)"Efficient exhaust draught" means localized ventilation affected by heat or mechanical means, for the removal of gas, vapour, dust or fumes so as to prevent them (as far as practicable under the atmosphere conditions usually prevailing) from the escaping into the air of any place in which work is carried on. No draught shall be deemed efficient which fails to remove smoke generated at the point where such gas, vapour, fumes or dust originate.

3)Application: - This schedule shall apply to all factories of parts of factories in which any of the following operations are carried on: -

a)Work at a furnace where the reduction or treatment of zinc of lead ones is carried on.

b)The manipulation, treatment or reduction of ashes containing lead the desilerising of lead or the melting of scrap lead or zinc.

c)The manufacture of solder or alloys containing more than ten per cent of lead.

d)The manufacture of any oxide, carbonate, sulphate, chromate, acetate, nitrate or silicate of lead.

e)Handling or mixing of lead-tetraethyl.

f)Any other operation involving the use of a lead compound.

g)The cleaning of work-rooms where any of the operations aforesaid and carried on.

4)Prohibited relating to women and young persons: - No woman or young person shall be employed or permitted to work in any of the operations specified in paragraph 3.

5)Requirements to be observed: - No person shall be employed or permitted to work in any process involving the use of lead compound is produced therein, or the persons employed therein ate liable to be splashed with any lead compound in the course of their employment unless the prohibitions of paragraphs 6 to 14 are compiled with.

6)Exhaust draught: - Where dust, fume, gas or vapour is produced in the process, provisions shall be made removing them by means of an efficient exhaust draught so contrived as to operate on the dust, fume, gas or vapour as closely as possible to the point of origin.

7)Certificate of fitness: - A person medically examined under paragraph B and found fit for employment shall be granted by a Certifying Surgeon a certificate of fitness in Form 28 and such certificate shall be in the custody of the manager of the factory. The certificate shall be kept readily available for inspection by any inspector and the person granted such a certificate shall carry with him, while at work, a token giving reference to such certificate.

8)Medical examination: -

1)The person so employed shall be medically examined by a Certifying Surgeon within fourteen days of his first employment in such process and thereafter shall be examined by the Certifying Surgeon at intervals of not more than three months, and a record of such examinations shall be entered by the Certifying Surgeon in the special certificate of fitness granted under paragraph 7.

2)If at any time the Certifying Surgeon is of opinion that any person is no longer fit for employment on the grounds that continuance therein should involve special danger to health he shall cancel the special certificate of fitness of that person.

3)No person whose special certificate of fitness has been cancelled shall be employed unless the Certifying Surgeon, after re-examination, again certifies him to be fit for employment.

8)A. Medical facilities: -

1)The occupier of the factory shall appoint at least a part-time qualified medical practitioner possessing MBBS degree and having post-graduate Diploma in Industrial Health or possessing MBBS degree and having five years experience in industry as occupational health physician. The medical practitioner, so appointed, shall be required to put in minimum four hours attendance on every working day in the ambulance room for carrying out the duties specified in the following sub-paragraph (2).

Provided that in cases of factories employing less than 500 workers per day, the Chief Inspector of Factories, may allow attendance for shorter duration after taking into consideration all the relevant facts of each case.

2)The medical practitioner so appointed shall perform the following duties, that is to say: -

a)to maintain Health Register.

b)to undertake medical supervision of persons engaged on dangerous operations specified in these rules.

c)to look after health, education and rehabilitation or sick, injured or affected workers.

d)to carry out inspection of work-rooms where dangerous operations are carried out and to advise the management of the measures to be adopted for protection of health of the workers involved therein.

e)For the purpose of medical supervision by the medical practitioner so appointed, the occupier shall provide for the former's exclusive use at the factory premises a room which shall be properly cleaned, adequately lighted, ventilated and furnished with a screen, a table with office stationary, chairs and other facilities and instruments including X-ray

arrangement for Schedules IV, X, XVII for such examination and such other equipments as may be prescribed by the Chief Inspector of Factories from time to time.

9)Food drinks, etc, prohibited in work-rooms: - No food, drink, pan and supari or tobacco shall be brought into or consumed by any worker in any work-room in which the process is carried on and no person shall remain in such room during intervals for meals or rest.

10)Protective clothing: - Suitable protective overalls and head coverings shall be provided, maintained and kept clean by the factory occupier and such overalls and head coverings shall be worn by the persons employed.

11)Cleanliness of work-room, tools, etc. – The rooms in which the persons are employed and all tools and apparatus used by them shall be kept in a clean state.

12)Washing facilities: -

1)The occupier shall provide and maintain for the use of all persons employed suitable washing facilities consisting of –

a)a trough with a smooth impervious surface fitted with a vaste pipe without plug and of sufficient length to allow at least two feet for every ten persons employed at my one time, and having a constant supply of clean water from tape or jet above the trough at intervals of not more than tow feet; or

b)at least one wash-basin for every ten persons employed at any one time, fitted with a waste pipe and plug and having a constant supply of clean water together with, in either case, a sufficient supply of nail brushes soap or other suitable cleaning material and clean towels.

2)The facilities so provided shall be placed under the charge of a responsible person and be kept clean;

13)Mess-room or canteen: - The occupier shall provide and maintain for the use of the persons employed suitable and adequate arrangements for taking their meals.

The arrangement shall consists of the use of a room separate from any work-room

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which shall be furnished with sufficient table and benches, and unless canteen serving hot meals is provided, adequate means for warming food. The room shall be adequately ventilated by the circulation of fresh air, shall be placed under the charge of a responsible person and shall be kept clean.

14)Clock-Room:- The occupier shall provide and maintain for the use of persons employed, suitable accommodation for clothing not worn during working hours, and for the drying of wet clothing.

Schedule VII

Generation of gas from Dangerous Petroleum as defined in the Petroleum Act, 1934.

1)Prohibition relating to women and young persons: No women or young person shall be employed or permitted to work in or shall be allowed to enter any building in which the generation of gas from dangerous petroleum as defined in clause (b) of section 2 of the Petroleum Act, 1934, is carried on.

2)Flame traps: The plant for generation of gas from dangerous petroleum as defined in clause (b) of section 2 of the Petroleum Act, 1934 and associated piping and fitting shall be fitted with at least two efficient flame traps so designed and maintained as to prevent a flash back from any burner to the plant. One of these traps shall be fitted as close to the plant as possible. The plant and all pipes and valves shall be installed and maintained free from leaks.

3)Generating Building or Room: All plants for generation of gas from dangerous petroleum as defined in clause (b) of section 2 of the Petroleum Act., 1934 erected after the coming into force of the provisions specified in the Schedule, shall be erected outside the factory building proper in a separate well ventilated building (hereinafter referred to as the "generating building"). In the case of such plant erected before the coming into force of the provisions specified in this Schedule there shall be no direct communication between the room where such plants are erected (herein after referred to as "the generating room") and the remainder of the factory building. So far as practicable, all such generating rooms shall be constructed of fire-resisting materials.

Provided that where the State Government is satisfied in respect of any factory that the plant for generation of gas from dangerous petroleum as defined in clause (b) of section 2 of the petroleum Act, 1934, is on account of the special precautions adopted or contrivances used for such plant, not likely to expose any persons employed in such factory to any serious risk of bodily injury, the State Government may, by notification on the Official Gazette, exempt such factory wholly or partially from the provisions of this clause for such period and on such conditions as it may specify.

4)Fire Extinguisher: An efficient means of extinguishing petrol fires shall be maintained in a easily accessible position near the plant for generating of gas from dangerous petroleum as defined in the Petroleum Act, 1934.

5)Plant to be approved by Chief Inspector: Petrol gas shall not be manufactured except in a plant for generating petrol gas, the design and construction of which has been approved by the Chief Inspector.

6)Escape of Petrol: Effective steps shall be taken to prevent petrol from escaping into any drain or sewer.

7)Prohibition relating to smoking etc.: No person shall smoke or carry matches, fire or naked light or other means of producing a naked light or spark in the generating room or building or in the vicinity thereof and a warning notice in the language understood by the majority of the workers shall be pasted in the factory

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prohibiting smoking and the carrying of matches fire or naked light or other means of producing, naked light or spark in such room building.

8)Access to Petrol or Container: No unauthorised person shall be of flame-proof construction and all electric conductors shall either be enclosed in metal conducts or be lead-sheathed.

9)Electric Fittings: All electric fitting shall be of flame-proof construction and all electric conductors shall either be enclosed in metal conduits or be lead-sheathed.

10)Construction: All doors in the generating room of building shall be constructed to open outwards or to slide and no doors shall be locked or obstructed or fastened in such manner that it can not be easily and immediately opened from the inside while gas is being generated and any persons is working in the generating room or building.

11)Repair of Containers: No vessel that has contained petrol shall be repaired in a generating room or building and no repairs to any such vessel shall be undertaken unless live steam has been blown into the vessel and until the interior is thoroughly steamed out or other equally effective steps have been taken to ensure that it has been rendered free from petrol or inflammable vapour.

Schedule VIII

Cleaning or smoothening, roughening etc of articles by a jet sand, metal shot or grit or other abrasive propelled by a blast of Compressed Air or steam blasting regulations.

1)Definitions: "Blasting" means cleaning, smoothening, roughening, or removing of any part of the surface of any article by the use of an abrasive as a jet of sand, metal shot, or grit or other material, propelled by a blast or compressed air or steam.

1)"Blasting Enclosure" means a chamber, barrel, cabinet or any other enclosure designed for the performance of blasting therein.

2)"Blasting Chamber" means a blasting enclosure in which any person may enter at any time in connection with work or otherwise.

3)"Cleaning of Castings" where done as an incidental or supplemental process in connection with the makings of metal casting, means the freeing of the casting from adherent sand or other substance and includes the removal of cores and the general smoothening of a casting where freeing is done but does not include the freeing of casting from scale formed during annealing or heat treatment.

2)Prohibition of sand blasting: - Sand or any other substance containing free silica shall not be introduced as an abrasive into any blasting apparatus and shall not be used for blasting.

Provided that this clause shall be brought into operation after two years from the date of commencement of these regulations.

3)Precautions in connection with blasting operations:-

1)Blasting to be done in blasting enclosure – Blasting shall not be done except in a blasting enclosure and no work other than blasting and any work immediately incidental thereto and clearing and repairing of the enclosure including the plants and appliances situated therein, shall be performed in a blasting enclosure. Every door, apparatus and joint of blasting enclosure shall be kept closed and airtight while basting is being done therein.

2)Maintenance of blasting enclosure: - Blasting enclosure shall always be maintained in good condition and effective measures shall be taken to prevent dust escaping from such enclosures, and from any blasting apparatus and used for blasting until it has been so separated.

3)Provision of separating apparatus: There shall be provided and maintained for and in connection with every blasting enclosure, efficient apparatus for separating, so far as practicable, abrasive, which has been used for blasting and which is to be used again as an abrasive, from dust or particles of other materials arising from blasting, and no such abrasive shall be introduced into any blasting apparatus and used for blasting until it has been so separated.

Separating apparatus shall be provided with exhaust draught arrangement to extract and remove the dust by special methods and in such manner so that it shall not escape into air of any rooms in which person are employed.

Provided that this clause shall not apply, except in the case blasting chambers, to basting enclosure constructed or installed before the coming into force of this Schedule, if the Chief Inspector is of the opinion that it is nor reasonably practicable to provide such separating apparatus.

4)Inspection and examination: -

1)Every blasting enclosure and/ or chamber shall be specially inspected for detecting leakages by a competent person at least once in every week in which

it is used for blasting. Every blasting enclosure, the apparatus connected therewith and the ventilating plant shall be thoroughly examined and in the case of ventilating plant, tested by a competent person at least once in every three months.

2)Particulars of the result of every such inspection, examination and test shall forthwith be entered in a register, which shall be kept in a form approved by the Chief Inspector and shall be available for inspection by any workman employed in or in connection with blasting in the factory.

Any defect found on any such inspection, examination or test shall be immediately reported by the person carrying out the inspection, examination or test to the occupier, manager or other appropriate person and without prejudice to the manager or other appropriate person and without prejudice to the foregoing requirements of this schedule, shall be removed without avoidable delay.

3)Every blasting chamber, separating apparatus, and ventilation plant shall be thoroughly inspected at an interval of 6 months for detecting any defect in their efficient operations, and the defects so noticed shall be rectified forthwith.

5)Provision of protective helmets gauntlets and overalls: -

1)There shall be provided and maintained for the use of all persons who are employed in a blasting chamber, whether in blasting or in any work connected therewith or in cleaning such a chamber, protective helmets of a type approved by a certificate of the Chief inspector, and every such person shall wear the helmet provided for his use while he is in the chamber and shall not remove it until he is outside the chamber.

2)Each protective helmet shall carry a distinguishing mark indicating the person by whom it is intended to be used and no person shall be allowed or required to wear a helmet not carrying his mark or a helmet which has been worn by another person unless it has been thoroughly disinfected.

3)Each protective helmet when in use shall be supplied with air at a rate of not less than six cubic feet per minute. The air supplied shall be cool and free from fumes or mist of mineral oil.

4)Suitable gauntlets, overalls, dust-proof goggles and boots shall be provided for the use of all persons while performing blasting or assisting blasting, and every such person shall, while so engaged, wear gauntlets and overalls provided.

6)Precautions in connection with cleaning and other work: -

1)Where any person is engaged upon cleaning of any blasting apparatus or blasting enclosure or separating apparatus or of any apparatus or ventilation plant connecting therewith of the surrounding thereof or upon any other work in connection with any blasting apparatus or with any blasting enclosure or with any apparatus or ventilating plant connected therewith so that he is exposed to the risk in inhaling dust which has arisen from blasting, all practicable measures shall be taken to prevent such inhalation. All the workers exposed to dust shall be provided with protective helmets with fresh air supply and overalls to prevent inhalation of dust.

2)In connection with any cleaning operation referred to in regulation 5, and with the removal of dust from filtering or settling devices all practicable measures shall be taken to dispose of the dust in such a manner that it does not enter the air of any room. Vacuum cleaners shall be provided and used for such cleaning operations.

7)Storage accommodations for protective wear: - Adequate and suitable storage accommodation for the helmets, gauntlets and overalls required to be provided under regulation 5 shall be provided outside and conveniently near to every blasting enclosure and such accommodation shall be kept clean. Helmets, gauntlets and overalls, when not in actual use, shall be kept in this accommodation.

8)Maintenance and cleaning of protective wear: - All members, gauntlets, overalls and other protective devices or clothing provided and worn for the purpose of this Schedule shall be kept in good condition and shall be cleaned on every week-day in which they are used. Where dust arising from the cleaning of such protective clothing or devices is likely to be inhaled all measures shall be taken to prevent such clothing and compressed air shall not be used for removing dust from any clothing.

9)Maintenance of vacuum cleaning plant: - Vacuum cleaning plant used for the purpose of this Schedule shall be properly maintained.

10)Prohibition relating to employment of women and young persons: -

1)No woman or young person under 18 years of age shall be employed in blasting or assisting at blasting or in any blasting chamber or in the cleaning of any blasting apparatus or any blasting enclosure or any maintenance or repair work at such apparatus, enclosure or plant.

2)No women or young person under 18 years of age shall be employed to work regularity within 20 feet of any blasting enclosure unless the enclosure is in a room and he or she is outside the room where he or she is effectively separated from any dust coming from the enclosure.

11)Medical Examination:

1)Every person employed in blasting or assisting at blasting or in any blasting chamber or in the cleaning of any blasting apparatus or any

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blasting enclosure or any apparatus or ventilating plant connected therewith or be employed on maintenance or repair work at such apparatus, enclosure or plant shall be medically examined by the Medical Inspector of Factories/ Certifying Surgeon within 30 days of his first employment, the record of which shall be entered in

Form 29 and if found fit for employment in the said process, he shall be granted by the Medical Inspector of Factories or Certifying Surgeon , a certificate of fitness in Form 28.

2)After the first examination, the persons so examined shall be examined by the Certifying Surgeon at intervals of twelve months and a records of such examination shall be entered by the Certifying Surgeon in

Form 29.

3)If at any time the Medical Inspector of Factories/ Certifying Surgeon is of the opinion that the person employed in the said process shall be examined radiologically by a qualified radiologist, he may direct the occupier to arrange for such examination at his cost and then to submit standard size chest X-Ray plate of the worker to the Medical Inspector of Factories/ Certifying Surgeon.

4)If at any time Certifying Surgeon/ Medical Inspector of Factories is of the opinion that any person is no longer fit for employment on the grounds that continuance therein would involve special danger to health, he shall cancel the special certificate of fitness in

Form 28 of that person and record in Form 29.

5)No person whose special certificate of fitness in Form 28 has been cancelled, shall be employed or permitted to work unless the Certifying Surgeon after re-examination, again certifies him to be fit for employment in the operations.

6)The register of the special certificates in

Form-28 granted by the Certifying Surgeon and the record made in Form No 29 by him shall be in the custody of the manager of the factory and shall be kept readily available for inspection by an Inspector.

12)Medical facilities & records: - Medical facilities and records of examinations and tests -

1)The occupier of every factory to which the schedule applies, shall –

a)employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment small be subject to the approval of the Chief Inspector of Factories;

b)provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (a).

2)The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.

13)Power to exempt or relax: -

1)If the Chief Inspector is satisfied that in any factory or any class of factories the use of sand or other substance containing free silica as an abrasive in blasting is necessary for a particular manufacture of process (other than the process incidental or supplemental to making of metal castings) and that the manufacture of process cannot be carried on without the use of such abrasive or that owing to the special conditions or special method of work or otherwise any requirement of this schedule can be

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suspended either temporarily or permanently, or can be relaxed without endangering the health of the persons employed or that application of any of such requirements is for any reason impracticable or inappropriate, he may, with the previous sanction of the State Government by an order in writing exempt the said factory or class or factories from such provisions of this Schedule, to such extent and subject to such conditions and for such period as may be specified in the said order.

2)The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separated register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.

13.Power to exempt or relax: -

1)If the Chief Inspector is satisfied that in any factory or any class of factories the use of sand or other substance containing free silica as an abrasive in blasting is necessary for a particular manufacture of process (other than the process incidental or supplemental to making of metal castings) and that the manufacture or process cannot be carried on without the use of such abrasive or that owing to the special conditions or special method of work or otherwise any requirement or this schedule can be suspended either temporarily or permanently, or can be relaxed without endangered the health of the persons employed or that application of any of such requirements is for any reason impracticable or inappropriate, he may, with the previous sanction of the State Government by an order in writing exempt the said factory or the State Government by an order in writing exempt the said factory or class or factories

from such provisions of this Schedule, to such extent and subject to such conditions and for such period as may be specified in the said order.

2)Where an exemption has been granted under paragraph (1) a copy of the order shall be displayed on a notice-board at a prominent place at the main entrance or entrance to the factory and also at the place where the blasting is carried on.

Schedule IX

Liming and tanning of the raw hides and skins and processes incidental thereto

1)Cautionary notices: -

1)Cautionary notice as to anthrax in the from specified by the Chief Inspector shall be affixed in prominent positions in the factory where they may easily and conveniently read by the persons employed.

2)A copy of a warning notice as to anthrax in the form specified by the Chief Inspector shall be given to each person employed when he is engaged and subsequently if still employed on the first day of each calendar year.

3)Cautionary notices as to the effects of chrome on the skin shall be affixed in prominent positions in every factory in which chrome solutions are used and such notices shall be so placed as to be easily and conveniently read by the persons employed.

4)Notices shall be affixed in prominent places in the factory stating the position of the “First Aid” box or cupboard and the name of the person in charge of such box or cupboard.

5)If any person employed in the factory is illiterate, effective steps shall be taken to explain carefully to such illiterate person the contents of the notices specified in paragraphs 1, 2, and 4 and if chrome solution are used in the factory, the contents of the notice specified in paragraph 3.

2)Protective Clothing: The occupier shall provide and maintain in good conditions the following articles of protective clothing: -

a)Water proof foot-wear, leg coverings, aprons and gloves for persons employed in process involving contact with chrome solutions including preparation of such solutions.

b)gloves, boots and chemical safety goggles for persons employed in lime-yard, and

c)protective foot-wear, aprons and gloves for persons employed in processes involving the handling of hides or skins, other than in processes specified in clauses (a) and (b).

Provided that:

i)the gloves, aprons, leg coverings or boots may be of rubber or leather, but the gloves and boots to be provided to persons fleshing by hand or employed in processes in which there is no risk of contact with lime.

ii)the gloves may not be provided to persons fleshing by hand or employed in processes in which there is no risk of contact with lime, sodium sulphide or other caustic liquor.

3)Washing facilities, Mess room and cloak room: The occupier shall provide and maintain in a clean state and in goof repair for the use of all persons employed:

a)a trough with a smooth impervious surface fitted with a washed pipe without plug and of sufficient length to allow at least 60 cm for every 10 persons employed at any one time, and having a constant supply of water from taps or jets above the trough at intervals of not more than 60 cm or

b)atleast wash basin for every 10 such persons employed at any one time, fitted with a waste pipe and plug and having a constant supply of water together with in either case, a sufficient supply of nail brushes, soap or other suitable cleansing material and clean towels.

c)a suitable mess room, adequate for the number remaining on the premises during the meal intervals, which shall be furnished with (1) sufficient tables and benches and (2) adequate means for warming food and for boiling water.

The mess room shall (1) be separated from any room or shed in which hides or skins are stored, treated or manipulated, (2) be separated from the cloak room and (3) be placed under the charge of a responsible.

d)suitable accommodation for clothing put off during working hours and separate accommodation for protective clothing and adequate arrangement for drying up the clothing in both the cases, if wet. The accommodation so provided shall be kept clean at all times and placed under the charge of responsible person.

4)Food, drink, etc. prohibited in work-rooms – No food, drink, pan and supari or tobacco shall be brought into or consumed by any worker in any work-room or shed in which hides or skins are stored, treated or manipulated.

5)First-aid arrangement – The occupier shall –

a)arrange for an inspection of the hands of all persons coming into contact solutions to be made twice a week by reasonable persons.

b)provide and maintain a sufficient supply of supply of suitable ointment and impermeable water proof plaster in a box readily accessible to the worker and used solely for the purpose of keeping the ointment and plaster.

Schedule X

Manufacture of chromic acid or manufacture or recovery of the bichromate of sodium potassium or ammonium

1.Definitions: - For the purpose of this Schedule –

a)“Chrome Process” means the manufacture of chromic acid or bichromate of sodium or potassium or ammonium or the manipulation, movement or other treatment or these substances in connection with their manufacture;

b)“Efficient exhaust draught” means localised ventilations effected by mechanical or other means for the removal of gas, vapour, dust or fumes, so as to prevent from escaping into the air of any place in which work is carried on. No draught shall be deemed efficient which fails to remove smoke generated to the point where such gas, vapour, fumes or dust originate;

c)“Suspension” means suspension form employment in any of the chrome processes specified by written certificate in the Health Register in

Form 29 signed by the Certifying Surgeon who shall have power of suspension as regards all persons employed in any such process.

2.Prohibition relating to women and young persons: - No woman or young person shall be employed or permitted to work on any chrome process.

3.Efficient exhaust draught: - The following chrome processes shall not be carried on without the use of an efficient exhaust draught, namely: -

a)grinding;

b)sieving;

c)batch mixing;

d)concentration;

4.Separation of certain process: - The following chrome processes, name: -

a)grinding of raw materials and

b)sieving of raw materials.

shall be carried on in such manner and under such conditions as to secure effectual separation from any other processes.

5.Washing facilities: -

1.Where acidification, sulphate settling or washing concentration crystallisation, centrifugation or packing is carried out, there shall be provided close to each worker's station: -

a)wash places installed for washing hands and feet frequently in running water, and

b)a container holding at least 500 millilitres of 10 percent solution of sodium bisulphate or any other suitable reducing agent.

2.There shall also be provided and maintained in a cleanly state and good repair washing accommodation under cover with a sufficient supply of soap and towels on the scale indicated below: -

At least one tap or stand pipe for every 10 employees and the tap or pipe shall be spaced not less than 120 centimetre apart.

Note: - In computing the total number of tape required for the purposes of this rule, the taps or stand pipes as required under clause 5(1) (a) shall be included.

6.Time to be allowed for washing: - Before each meal and before the end of the day's work at least ten minutes, in addition to the regular meals time, shall be allowed for washing to each person employed in a chromic process.

7.Flooring: - The floor of every work-room shall be –

a)of cement or similar other material so as to be smooth and impervious to water and provided with suitable gradient and drainage;

b)maintained in sound condition and cleaned daily;

8.Medical facilities: -

1.The occupier of the factory shall appoint at least a part-time qualified medical practitioner, possessing MBBS degree and having post-graduate Diploma in Industrial Health of processing MBBS degree and having five years experience in industry as occupational health physician. The medical practitioner, so appointed, shall be examine and treat all workers, for chrome ulcerations and occupational diseases, on the premises at least at thrice a week. The medical practitioner so appointed, shall be required to put in minimum four hours attendance on every working day in the ambulance-room for carrying out the duties specified in the following sub paragraph (2).

Provided that, in the case of factories employing less than 500 workers per day, the chief Inspector of Factories may allow attendance for shorter duration, after taking into consideration all the relevant facts of each case.

2.The medical practitioner so appointed shall perform in addition to the duties specified in sub-paragraph (1) the following duties that is to say: - a.to maintain Health Register in

Form 29.

b.to undertake medical supervision of persons engaged on dangerous operations specified in rule 165 of these rules.

c.to look after health, education and rehabilitation of sick, injured or affected worker;

d.to carry out inspection of work-rooms where dangerous operations are carried out and to advise the management of the measures to be adopted for protection of health of the workers involved therein.

3.The occupier shall in addition appoint a person trained in First Aid who shall inspect daily the hands and feet of all persons employed and shall keep a record of such inspection may register maintained for the purpose in a Form approved by the Chief Inspector of factories;

4.The occupier shall also provide and maintain a sufficient supply of suitable antidotes, ointment and impermeable water-proof plaster in a separate box readily accessible to the workers and used solely for the purpose of keeping the antidotes, ointment and plaster.

9.Protective equipment: -

1.The occupier shall provide and maintain for the use pf the persons employed: -

a)in grinding, sieving, or mixing raw materials, sufficient and suitable respirators (issued separately for each individual) the filtering materials of which shall be renewed daily;

b)in roasting process, suitable footwear;

c)in acidification, settling, concentration, crystallisation, centrifugation packing, suitable aprons and protective coverings for hands and feet.

2.Arrangements shall be made by the occupier for the examination and cleaning of all the protective equipment at the close of each day's work and for the renewal thereof when necessary.

10.Use of protective equipment: - Every person employed in a chrome process shall make use of the protective equipment provided under paragraph 9 above.

11.Cloak room: - There shall be provided and maintained in a clean and in good repair for the use of all persons employed in any chrome process: -

a)a cloak-room for street clothing put off during working hours, including adequate arrangements for drying such clothing, when wet; such accommodation shall be separate form any mess-room;

b)separate and suitable arrangements for the storage of protective clothing provided under paragraph 9.

12.Mess-room: -

1.There shall be provided and maintained for the use of all persons remaining within the premises during the meal intervals a suitable mess- room providing accommodation of at least one square metre per head and furnished with -

i)a sufficient number of tables and chairs or benches;

ii)arrangements for washing utensils;

iii)adequate means for washing food.

2.The mess-room shall be placed under the charge of a responsible person and shall be kept clean

13.Food, drinks, etc, prohibited in workrooms: - No food, drink, pan, supari or tobacco shall be brought or carried on and no person shall remain in any such room during intervals for meals or rest.

14.Medical examination: -

1.Every person employed in a chrome process, shall be examined by the Certifying Surgeon once in every calendar month or at such other intervals as may be specified in writing by the Chief Inspector on a day of which due notice shall be given to all concerned and such examination shall take place on the factory premises.

2.A Health Register in Form 29 containing the names of all persons employed in a chrome process shall be kept.

3.No person after suspension shall be employed in chrome process without a written sanction from the Certifying Surgeon entered in the Health Register.

15.Fencing of vessels: - Every fixed vessel, whether pot, pan, vat or other structure, containing any dangerous materials, and not so covered as to eliminate all reasonable risk of accidental immersion of any portion of the body of a person employed shall be fenced as follows: -

a)Each such vessel shall, unless its edge is at least one metre above the adjoining ground or platform, be securely fenced to a height of at least 90 centimetres above such adjoining ground or platform.

b)No plank or gang-way shall be placed across or inside any such vessel unless such plank or gang-way is: -

i)at least 45 centimetres wide, and

ii)securely fenced on both sides, either by upper and lower rails, to a height of 90 centimetres or by other equally efficient means;

c)If any two such vessels are near each other and the space between them clear of any surrounding brick-work or other work, is either -

i)less than 45 centimetres in width, or

ii)is 45 or more centimetres in width, but is not accurately fenced on both sides to a height of at least 90 centimetres secure barrier shall be placed so as to prevent any passage between them.

16.Cautionary notice: - A cautionary notice in the form specified by the Chief Inspector and printed in the language of the majority of the workers employed shall be affixed in a prominent place in the factory where it can be easily and conveniently read by the workers.

17.Exemption: -If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or the in frequency of the process, or for any other reason, all or any of the provisions of this Schedule are not necessary for the protection of the persons employed in such factory, he may by certificate in writing exempt such factory from all or any of the provisions indicated in such certificate on each conditions as he may specify therein, such certificate may at any time be revoked by the Chief Inspector, without assigning any reasons.

Schedule XI

Manufacture or manipulation of Nitro or Amino compounds

1.Application: - This Schedule shall apply in respect of all factories or any park thereof in which process of manufacturing of a nitro or amino compound (therein after referred to as the said manufacturing process) is carried on;

Provided that clause paragraphs 25 and 26 shall only apply to a process involving manufacture or manipulation of compound in Appendix B (hereinafter referred to as the said manufacturing process B).

Part I

2.Definitions: -

a)For the purpose of this Schedule a nitro or amino compound means a nitrated or aminated compound of aromatic hydrocarbons mentioned in Appendix 'A' or 'B' attached thereto.

b)"Approved" means approved by the Chief Inspector.

c)"First Employment" means first employment in the said manufacturing process and also re-employment in such manufacturing process following any cessation of employment for continuous period exceeding three calendar months.

d)"Efficient Exhaust Draught" means localised ventilation effected by mechanical means for the removal of gas, vapour, dust or fume so as to, prevent them from escaping into the air or any place in which work is
carried on. No draught shall be deemed to be efficient which fails to remove smoke generated at the point where such gas, vapour, fumes or dust originates.

e)Manipulation shall include mixing, blending, filling, emptying, grinding, sleving, drying, packing, sweeping, handling, using or chemical processing of a nitro amino compound.

f)"Air Line respiration" means a helmet or face piece with necessary connections by means of which a person using it in a poisonous or irritant atmosphere breathe ordinary air or any other suitable apparatus approved in writing by the Chief Inspector.

3)Cautionary Placard: - Cautionary placard in the form specified in Appendix 'C' attached to this Schedule and printed in the language of the majority of the workers employed shall be affixed in prominent places frequented by them in the factory where the placards can be easily and conveniently read by the workers; and arrangement shall be made by the occupier to instruct periodically all workers employed in the said manufacturing process regarding the precautions contained in the cautionary placard.

3.A) Instructions as regards risk: -Every worker on his first employment shall be fully instructed about the properties of the chemicals he has to handle and the dangers involved in his work. He shall also be instructed about the measures required to be taken to deal with any emergency arising in the said manufacturing process.

4.Prohibition relating to employment of women and young persons: -No woman or young person shall be employed or permitted to work in any room in which the said manufacturing process is carried on or in which a nitro or amino compound is stored.

5.Air Space: - In every room in which the said manufacturing process is carried on there shall be at least 15 Cubic metre of air space excluding any space occupied by machinery equipment or any other article, for each person employed therein and in computing this air space no height over 4.25 metres shall be taken into account.

6.Efficient exhaust draught: - Unless the said manufacturing process is completely enclosed so as not to give rise to dust or fume it shall not be carried on without the use of an efficient exhaust draught when a nitro or amino compound -

a)is introduced into a tank, hopper, machine or container or filled into cartridge; or

b)is ground , crushed, mixed, sieved or blended.

7.Floor of workrooms: - The floor of every work-room in which the said manufacturing process is carried on shall be (a) smooth and impervious to water provided that asphalt or tar shall not be used in the composition of the floor (b) maintained in sound condition, (c) sloping and provided with gutters and (d) thoroughly washed daily by means of hose-pipe and drain water shall be led into a sewer through a closed channel.

8.Work-benches: - Work-benches on which a nitro or amino compound is manipulated shall (a) have a smooth impervious surface (of stainless steel) and (b) shall be washed daily with hose-pipe of cleaned by means of a suction cleaning apparatus at a time when no other work is being carried on thereat.

9.Waste: -

1)A suitable receptacle made of non-absorbable material with a tightly fitting cover, shall be provided and used for depositing waste, like cloth, paper or other materials soiled with a nitro or amino compound.

2)All such contaminated waste material shall be destroyed by burning at least once a week.

10.Empty containers: - Empty containers used for holding compound included under Appendix "A" shall be thoroughly cleaned of their contents and treated with an inactivating agent before being discarded.

Empty non-metallic container used for holding compounds included under Appendix 'B' shall be burnt. Residual content of the metallic container shall be burnt out.

11.Decontamination of pit tank etc.: -

a)Before a worker enters a tank, pit, kettle or any other confined space which contained a nitro or amino compound it shall be thoroughly washed and decontaminated.

b)No part of the plant which has contained a nitro or amino compound shall be repaired or opened for repairs unless it has been emptied of such compound, thoroughly washed and decontaminated.

c)Records of such treatment shall be maintained in a Register approved by the Chief Inspector and the register shall be made available for inspection when required by an inspector.

12.Manual handling: - A nitro or amino compound shall not be required or allowed to be mixed, filled, emptied or handled except by means of a scoop with a handle which shall be thoroughly cleaned daily.

13.Protective wear: - The occupier shall provide, maintain clean and in good repair protective clothing and other equipment as specified in the table below: -

Process and other	**Protective clothing equipment**
For manipulation of compounds mentioned in Appendices 'A' and 'B'	a) Long pants and shirts oroverall with long-sleeves and head covering. The shirt of overalls shall cover the neck completely. b)Rubber gloves, rubber gum boots, rubber aprons and air line respirator.

For manipulation of compounds in Appendix 'B'	a) White clean clothing mentioned in (a) above in addition to white clean shirts singlet and protective equipment as in (b) above. b) White long-sleeved apron.	mentioned

14.Medical Facilities: -

1)The occupier of the occupier of the factory shall appoint at least a part-time qualified medical practitioner, possessing MBBS degree and having post-graduate Diploma in Industrial Health or possessing MBBS degree and having five years experience in industry as occupational health physician. The medical practitioner, so appointed, shall be required to put in minimum four hours attendance on every working day in the ambulance room for carrying out the duties specified in the following sub-paragraph (2).

Provided that, in cases of factories employing less than 500 workers per day, the Chief Inspector of Factories may allow attendance for shorter duration, after taking into consideration all the relevant facts of each case.

2)The medical practitioner so appointed shall perform the following duties, that is to say: -

a)to maintain Health Register in Forms 29.

b)to undertake medical supervision of persons engaged engaged on dangerous operations specified in rule 163 of these rules;

c)to took after health education and rehabilitation of sick, injured or affected workers;

d)to carry out inspection of work-rooms where dangerous operations are carried out and to advise the management of the measures to be adopted for protection of health of the workers involved therein.

3)For the purpose of medical supervision by the medical practitioner so appointed the occupier shall provide for his exclusive use a room in the factory premises which shall be properly cleaned, adequately lighted, ventilated, and furnished with a screen, a table with office stationary, chairs and other facilities and instruments including X-Ray arrangements for Schedules IV, X and XVII, for such examination and such other equipments as may be prescribed by the Chief Inspector of Factories from time to time.

15.Medical examination: -

1.a) No person shall be employed in the said manufacturing process unless he has been examined by using appropriate tests, and found fit for the said process by the appointed doctor. Results of such examination shall be entered in a register approved by the Chief Inspector. The register shall contain the names of workers employed in the said manufacturing processes 'A' and 'B' separately.

b)The person examined in compliance with sub-paragraph (1) (a) shall be re-examined by the appointed doctor at intervals of not more than three months or at such interval as may be directed in writing by the Chief Inspector, and records or such examination shall be entered in the register provided under the said sub-paragraph.

c)If at any time, the appointed doctor is of opinion that any person is no longer fit for employment in the said manufacturing process on the ground that continuance thereat would involve special danger to health he shall make a

record of his findings in the said register and intimate the manager in writing that the said person is unfit to work in the said manufacturing process.

d)A person so found unfit by the appointed doctor shall be sent by the manager to the Certifying Surgeon with a report from the appointed doctor. The Certifying Surgeon after examination may suspend the said person from work in the said manufacturing process.

2.a) A person employed in the said manufacturing process shall be medically examined by a Certifying Surgeon within thirty days of his first employment in such process and if found fit for employment in the said process he shall be granted by the Certifying Surgeon a certificate if
fitness in Form No. 28. The person granted such a certificate shall carry
with him, while at work, a token giving reference to such certificate.

b)After the first examination the person so examined shall be examined by the Certifying Surgeon at intervals of not more than twelve months and a record of such examination shall be entered by the Certifying Surgeon in the special certificate of fitness in

Form No. 28.

c)If any time the Certifying Surgeon is of the opinion that any person is no-longer fit for employment on the ground that continuance therein would involve special danger to health he shall cancel the special certificate of fitness in

Form No. 28 of that person.

d)No person whose special certificate of fitness in Form No. 28 has been cancelled shall be employed or permitted to work unless the Certifying Surgeon after re-examination, again certificates him to be fit for employment in the said process.

3.The register of results of examination maintained by appointed doctor referred to in sub-paragraph (1) (a) and the special certificates in Form No. _____ granted by the Certifying Surgeon be in the custody of the manager of the factory and shall be kept readily available for Inspection by an Inspector.

4.No person other than the person granted a certificate of fitness in

Form 28 by the Certifying Surgeon and carrying a token referred to in Sub-paragraph (2) (a) above shall be allowed to work in any work-room in which the said manufacturing process is carried on.

16.Washing and bathing facilities: -

1)The following washing and bathing facilities shall be provided and maintained in cleanly state and in good repair for the use of all persons employed in the said manufacturing process: -

a)A wash place under cover with clean towels, soap and nail brushes and with at least one stand pipe for every five such persons having constant supply of water.

b)50 percent of the stand pipes provided under item (1) above shall be located in bathroom where both hot and cold water shall be made available during the working hours of the factory and for one hour thereafter.

c)The washing and bathing facilities shall be within a radius of 15 metres from the area housing the said manufacturing process.

d)Clean towels shall be provided individually to each worker if so ordered by an Inspector.

e)In addition to taps mentioned under item (a), one stand pipe in which warm water is made available shall be provided on each floor.

2)Arrangements shall be made to wash factory uniforms/ clothing compulsory every day.

17.Washing and bathing: -

a)All workers employed in the said manufacturing process shall carefully wash their hands and face before partaking of food of leaving the factory. b)Bath register: - Workers employed in the said manufacturing process shall take a bath daily at the factory premises and enter their names in the bath register in token of having done so.

18.Food, drinks etc. prohibited in work-room: - No worker shall consume food, drink, pan, supari or tobacco or shall smoke in any work-room in which the said manufacturing process its carried on and no worker shall remain in any such room during intervals for meal or rest.

19.Cloakroom: - There shall be provided and maintained in clean state and in good repair for the use of the persons employed in the said manufacturing process (a) a cloak room with lockers having two compartments one for street clothes and the other for factory clothes, (b) a place, separate from locker room and from the mess-room, for the storage of protective equipment provided under paragraph 13.

The accommodation provided shall be under the care of a responsible person and shall be kept clean.

20.Mess-room: - There shall be provided and maintained for the use of all persons employed in the factory and remaining on the premises during the meal intervals a mess-room which shall be furnished with (a) tables and benches and (b) means for warming food.

The mess -room shall be placed under the charge of a responsible person and shall be kept clean.

21.Time allowed for washing: - Before each meal and before the end of the day's work at least ten minutes in addition to the regular intervals shall be allowed for washing to each person who has been employed in the manufacturing process.

22.Drying stoves: -

1)Every drying stove shall be efficiently ventilated to the outside air in such manner that hot air from the stove shall not be drawn into any work-room.

2)No person shall enter stove to remove the contents until a free current of air has been passed through it by mechanical means.

23.Non-sparking tools: - Non sparking tools shall be provided for the purpose of cleaning or repairing machinery or operating any process where vapours of betanaphthylamine are evolved.

24.Testing of atmosphere, etc: - Amines in the atmosphere of the work-room where the manufacturing process is carried on shall be estimated once every week and records of results of such estimations shall be made available when required by an Inspector.

Part II

25.Separation of processes: - The said manufacturing process 'B' shall be carried on in rooms which shall not communicate with any other room except through a passage open entirely to outside atmosphere.

26.Limitation of exposure: -

1)No worker under the age of 40 years shall be engaged in the factory for the said manufacturing process 'B' for the first time after the date on which these rules come into force.

2)Before the end of the days at least one our shall be allowed for bathing to each person, who is employed in the said manufacturing process 'B' including the time allowed under paragraph 19.

27.Exemption: - If in respect of any factory the Chief Inspector is satisfied that (owing to the exceptional circumstances or infrequency of the process or for any other reason) all or any of the provisions of this Schedule are not necessary for the protection of persons employed in the factory, he may by certificate in writing exempt such factory from all or any of such provisions subject to such conditions as he may specify therein. Such certificates may at any time be revoked by the Chief Inspector.

Appendix "A" (See paragraphs 2, 10, 13 and 15)

The benzenes, toluenes, xylenes, having undergone nitration once or several times (nitrodininitro and trinitro benzene and its homologues) and their chlorinated compounds, naphthalenes, having undergone nitration once or several times, aniline and its homologues (toludine, xylidine, cumidine), anisidine, phenetidine, and their chlorinated, nitrated and alkylated compounds (dimethylanilin, toluydendiamine, phynylhydrazine, toluylhydrazine).

Appendix 'C' (See paragraph 3) Cautionary placard

Advice to workers: -

1.Nitro and amino compounds or aromatic hydrocarbons are dangerous. In this factory you have to handle them frequently.

2.All items of protective wear provided should be made use of to safeguard your health.

3.Maintain scrupulous cleanliness at all times. Before meal wash hands and feet. A bath before leaving the factory is essential, taking care to wash the head well.

4.If any chemical fails on your body, wash it off immediately with soap and water. Change clothing at once, if (soiled) with a cyanotic nitro or amino compound. Contact the appointed doctor immediately.

5.Do not handle any nitro or amino compound with bare hands. Use a long-handled scoop.

6.Avoid alcoholic drinks as these increase risk of poisoning.

7.In case of illness contact the Factory Manager and the appointed doctor.

8.Do not chew, eat, drink or smoke or smoke in the work-room or with soiled hands. Keep food and drink away from the work-place.

9.If you work with betanapthylamine or benzidine or its salts, alphanaphthylamine or (dianisidine).

a)remember that serious effects will follow after a number of years if great care is not taken to observe absolute cleanliness of body clothes, machinery and tools.

b)at meal time, wash face and hands twice with soap and water to remove all chemicals, wear a long sleeved clean apron while eating;

c)before leaving the factory take a bath using soap and water twice; after this put on your home clothes.

Schedule XII

Handling and manipulation of corrosive substances.

1.**Definition: -** For the purposes of this Schedule: -

a)"corrosive substance" includes sulphuric acid, nitric acid, hydrochloric acid, hydrofluoric acid, carbonic acid, phosphoric acid, liquid chlorine, liquid chlorine, liquid bromine, ammonia or mixtures thereof or any other substance which the State Government may, by notification in the Official Gazette, specify to corrosive substance.

b)"corrosive operation" means an operation of manufacturing, storing, handling, processing, packing or using any corrosive substance in factory; 2)Flooring: -The floor of every work-room of a factory to which this Schedule applies, shall be made of impervious, corrosion and fire resistant material and shall be so constructed as to prevent collection of any corrosive substances. The surface or such flooring shall be smooth and cleaned as often as necessary and maintained in a sound condition.

3)Protective equipment: -

a)The occupier shall provide maintain in a good order and keep in a clean condition for the use of all persons employed in any corrosive operation, suitable protective wear for hands and feet, suitable aprons, face shields, chemical safety goggles and suitable respirators.

b)The protective equipment provided shall be used by every person engaged in doing any corrosive operation.

4.Water facilities: - Where any corrosive operation is carried on, there shall be provided as close to the place of such operation as possible, a source of water at a height of 2 meters secured from a pipe of 25 mms. diameter fitted with a quick acting value, or safety tank having dimensions not less than 200cms in length129cms. in breadth and 60sms. in depth full of clean water placed at the floor level or such dimension as are approved by the Chief Inspector of Factories, so that in case of injury to the worker by any corrosive substances, the injured part can be thoroughly flooded with water.

5.Cautionary notice: - A cautionary notice in the following form printed in the language which the majority of the workers employed in the factory understand shall be affixed prominently close to the place where any of the corrosive operations is carried out and where it can be easily and conveniently read by the workers. If any worker is illiterate, effective steps shall be taken to explain carefully to him the contents of the notice so affixed: -

Cautionary

Notice Danger

Corrosive substances cause service burns and vapours thereof may be extremely hazardous.

Use protective wear.

I case of contact, immediately flood the part affected with plenty of water for at least 15 minutes.

Get medical attention quickly.

6.Transport:-

a)Corrosive substances shall not be filled, moved or carried except in containers, and when they are to be transported, the containers shall be included in crates of sound construction and of sufficient strength.

b)Containers having a capacity of 10 or more litres of a corrosive substance shall be placed in a receptacle or crate and then carried by more than one person at a

height below the waistline unless a suitable rubber wheeled truck is used for the purpose.

c)Containers for corrosive substances shall be clearly labelled as such.

7.Devices for handling corrosive substances: -

a)Suitable tilting or lifting device shall be used for employing jars or carboys and other containers of corrosive substances.

b)Corrosive substances shall not be handled by bare hands but by means of a suitable scoop.

8.Opening of valves: - Valves fitted to containers holding a corrosive substance which do not work freely shall not be forced open. They shall be opened by a worker suitably trained for the purpose.

8.A) Prevention of splashing of corrosive substance leaking: - All flange joints on line s carrying corrosive substance under pressure shall be provided with guards to prevent splashing of corrosive substance leaking through the joints due to gasket failures on workers working nearby.

9.Cleaning tanks, stills, etc: -

a)In cleaning out or removing residues from stills or other large chambers used for holding corrosive substances, wooden implements shall be used to prevent production of arseniuretted hydrogen (Arsine)

b)Whenever it is necessary for any worker to enter confined spaces, like chambers or tanks which were used to stock corrosive substances, while for the purpose of cleaning or other maintenance shall be taken to ensure the worker's safety.

c)Before repairs are undertaken to any part of equipment in which a corrosive substance was handled, such equipment or part thereof shall be freed of any adhering corrosive substance by adopting suitable methods.

10.Storage: -

a)Corrosive substances shall not be stored in the same room with other chemicals which are likely to violently react with them or give rise to poisonous fumes or gases after an accidental mixing, e.g. turpentine, carbides, metallic powders, combustible materials and cyanide salts.

b)Pumping or filling overhead tanks, receptacles, vats and other containers shall be so arranged that there is no possibility of any corrosive substance overflowing and causing injury to any person.

c)Every container having a storage capacity of twenty litres or more pipe lines, valves and fitting used for storing or carrying corrosive substances shall be examined thoroughly every year for finding out any defect and the defects shall be removed forthwith. A register shall be maintained of every such examination made and it shall be produced before the Inspector, whenever required.

11.Fire extinguishers: - An adequate number of suitable types of fire extinguishers or other fire-fighting equipments, depending on the nature of the chemicals stored in any place in a factory, shall be placed near each such place and such fire-extinguishers or other fire-fighting equipments shall be regularly tested and refilled. Clear instructions as to how the extinguishers or other equipments should be used, printed in the language which the majority of the workers employed in such factory understand, shall be affixed near each extinguisher or other equipment. Sufficient number of workers shall be trained in fire-fighting practices.

12.Exemption: - If in respect of any factory on an application made by the manager, the Chief Inspector is satisfied that owing to the exceptional circumstances or the infrequency of the process or for any other reason to be recorded in writing all or any of the provisions of this Schedule are not to necessary for the protection of the persons employed in such factory, he may by a certificate in writing exempt such factory from all or any of the provisions indicated in such certificate on such conditions as he may specify therein. Such certificate may at any time be revoked by the Chief Inspector.

Schedule XIII

Manufacturing of bangles and other articles from cinematograph film and toxic inflammable solvents

1.Definition: - For the purpose of this Schedule: -

a)toxic and inflammable solvents mean: -

i)solvents like acetone, tetrachlorethane, alcohol, denatured sprit, phenol, amylacitate, butyle acetate, diacetone, alcohol and such other substances which in the opinion of the Chief Inspector are toxic and inflammable;

ii)"bangle polish" and "bangle mixture" and such other solvents by whatever trade name they are known, used in the manufacture of bangles and other articles from cellulose films;

b)"suspension" means suspension from employment in any process in which toxic and inflammable solvents are used, by written certificates in the Health Register signed by the Certifying Surgeon, who shall have the power of suspension as regards all persons employed in any such process; c)"approval" means approved by the Chief Inspector.

d)"first employment" means first employment in any process referred to in this Schedule and also re-employment in such manufacturing process following any cessation of employment for a continuous period of three calendar months.

2.Application: - This Schedule shall apply in respect of all factories or any part thereof in which the process of manufacture of bangles and other articles from cinematograph film or from toxic and said manufacturing process) is carried on. 3.Prohibition relating to employment of women and young persons: - No women or young persons shall be employed or permitted to work out or in any room in which toxic or inflammable substances or both are stored or treated.

4.Medical examination: -

1)No person shall be employed in any of the said manufacturing processes unless he has been examined by ht Certifying Surgeon within seven days preceding his first employment and certified fit for such employment.

2)No person shall be employed in any of the said manufacturing processes unless he is re-examined by the Certifying Surgeon at least once during each calendar month or at such intervals as may be specified in writing by the Chief Inspector.

3)The Certifying Surgeon shall examine persons employed in any of the said manufacturing process by giving due notice to all concerned.

4)No person after suspension shall be employed without written sanction from the Certifying surgeon entered in or attached to the Health Register.

5)No person after suspension shall be employed without written sanction from the Certifying surgeon entered in or attached to the Health Register.

5.Protective clothing: - Protective clothing shall be provided and maintained in good repair for all workers employed in the factory and such clothing shall be worn by the workers concerned. The protective clothing shall consist of a suitable apron and if so required by the Chief Inspector a head covering provided in that behalf. The head coverings so provided shall be washed daily.

6.Ventilation: - Every workroom in which cinematograph film or toxic and inflammable solvents or both are handled or manipulated or used shall be provided with inlets and outlets of adequate size so as to secure and maintain efficient ventilation in all parts of the room during working hours.

Provident that the preparation of "cylinders" from cinematograph film and toxic and inflammable solvents, cutting of such cylinders into bangles and heat treatment of the bangles shall be carried out in an open space under cover, unless specially exempted by the Chief Inspector.

7.Drying of cinematograph film: -

1)Drying of cinematograph film shall not be except under such conditions as will prevent the cinematograph film from coming into contact or proximity with any source of heat or heated surface in such a manner as would render the cinematograph film liable to be ignited or decomposed.

2)Loose unwound cinematograph film shall be enclosed during drying in such a manner that a person in a room will be protected as far as practicable from an outburst of flame.

3)The temperature in any part of drying enclosure for loose unwound cinematograph film other than a safety acetate film shall not at any time exceed 110oF. A thermometer shall be kept available in every room in which such drying is done.

4)Boiling of raw film either alone or in conjunction with other chemicals or heating of bangles and other articles made of film shall be carried out in an open space.

5)A sufficient number of buckets filled with water shall be provided near the places where bangles are subjected to heat treatment.

8.Storage of raw materials: -

i)Each roll or package of cinematograph film used in any of the said manufacturing process, shall except when required to be exposed for the purposes of the work carried on, be kept in a separate box, properly closed and constructed of metal or other approved metal.

ii)Without prejudice to the Cinematograph Film Rules, 1948, municipal rules and other rules in force, all cinematograph films not being actually used or manipulated shall be kept in a room or camber or similar enclosure approved by the Chief Inspector. Toxic and inflammable solvents stock shall be stored in approved place or containers

9.Disposal of waste films: -

i)All waste and scrap of cinematograph film shall be collected at frequent intervals during each day and be placed in strong metal receptacles fitted with self-closing lids and clearly marked with words, "Film Waste".

ii)No material liable to ignite spontaneously nor anything likely to ignite or decompose cinematograph film shall be placed in the receptacle.

iii)At the end of each day's work waste and scrap films shall be either transferred to a store-room or removed from the premises.

iv)Waste films and shavings shall be destroyed by burning in an open place under controlled conditions. They shall not be allowed to be thrown or scattered in or about the premises of the factory.

10.Prohibition of smoking: -

i)No person shall be allowed to smoke in any room in which cinematography film is manipulated, stored or used.

ii)No open fire or light or any smoking materials or matches nor anything likely to ignite or decompose cinematograph film shall or toxic inflammable solvents or both are stored, manipulated or used.

Provided that Chief Inspector may permit the use of coal sigree in the heat treatment of bangles subject to such conditions as he may specify in writing.

11.Caution with regard to electrical installation: - All electrical installations and fittings shall be of flame-proof type.

12.Floor of work-rooms: - The floor of every work-room in which any of the said manufacturing process are carried on shall be: -

a)of cement or similar material so as to be smooth and impervious to water.

b)maintained in sound condition;

c)kept free from materials, plant or other obstruction not required for, or produced in, the purpose carried on in the room.

d)cleaned daily after being thoroughly sprayed with water at a time when no other work is being carried on in the room.

13.Time to be allowed for washing: - Before meal and before the end of the day's work at least ten minutes in addition to the regular meal times shall be allowed for washing to washing to each person who has been employed in any of the said manufacturing process.

14.Washing facilities: - There shall be provided and maintained in a cleanly state and in good repair for the use of all persons, a wash place under cover, with either: -

i)a trough with a smooth impervious surface fitted with a waste pipe without plug and of sufficient length to allow of at least 60 centimetres for every five such persons employed at one time and having a constant supply of water from taps of jets above the trough at intervals of not more than 60cm. or

ii)At least one wash basin for every five such persons employed at any one time fitted with a waste pipe and plug and having a constant supply of water laid on; and

iii)a sufficient supply of clean towels made of suitable material which shall be renowed daily, which supply if so required by the Inspector, shall include a separate marked towel for each such worker; and

iv)a sufficient supply of soap or other suitable cleansing material and of nail brushes.

15.Facilities for bathing: - The Chief Inspector may require any factory occupier to provide sufficient bath accommodation for all persons engaged in all or in any of the said manufacturing processes and also sufficient supply of soap and clean towels.

16.Cloak-room: - If the Chief Inspector so requires, there shall be provided and maintained for use of persons employed in any of the said manufacturing process: -

a)a cloak room for clothing put off during working hours with adequate arrangement for drying the clothing, if wet;

b)separate and suitable arrangements for the storage or protective clothing provided under paragraph 5.

17.Food, drinks, etc. prohibited in work-rooms: - No food, drink, pan and supari or tobacco shall be consumed or brought by any worker into any work-room in which any of the said manufacturing process is carried on.

18.Mess-room: - If the Chief Inspector so requires, there shall be provided and maintained for the use of all persons employed in the factory and remaining of the premises during the meal intervals, a suitable mess-room which shall be furnished with: -

a)sufficient tables and benches;

b)adequate means for warming food.

The mess shall be placed under the charge of a responsible person and shall be kept clean.

19.Fire-fighting appliances: -

1)Adequate mean of extinguishing fires having regard to the amount of celluloid present in the room at any one time shall be kept constantly provided for each work-room and store-room.

2)The fire-fighting appliances shall be maintained in good condition and kept in a position which is easily accessible.

20.Means of escape in case of fire: - Adequate means of escape in case of fire shall be provided in every room in which cinematograph film is manipulated, used or stored and the means of escape shall not be deemed adequate unless -

a)at least two separate exists are provided from every such room and two safe ways of escape from the building are available for all persons employed in the factory, and

b)all doors and windows provided in connection with the means of escape are constructed to open outwards readily.

21.Cautionary notices: -

i)Cautionary notices explaining the dangers to which workers are exposed due to any of the said manufacturing processes being carried on shall be affixed in prominent positions in the factory where they may be easily and conveniently read by the persons employed. The said notice shall be printed in the languages understood by the majority of workers employed in the factory.

ii)If any person employed in the factory is illiterate effective steps shall be taken to explain carefully to such illiterate persons the contents of the notices.

22.Exemption: - If in respect of any factory the chief Inspector is satisfied that owing to exceptional circumstances or infrequency of the process or for any other reason, all or any of the provisions of this schedule are not necessary for the protection of the persons this employed in the factory, he may by a certificate in writing exempt such factory from all or any of the provisions on such conditions as he may specify therein. Such certificate may at any time be revoked by the Chief Inspector without assigning any reasons.

Schedule XIV

Processes involving manufacture, use or evolution or carbon disulphide and hydrogen sulphide

1. Definitions: - For the purposes of this Schedule –

a)i) "breathing apparatus" means a helmet or face piece with necessary connections by means of which the person using it in a poisonous, asphyxiating or irritant atmosphere breathes ordinary air;

ii)any other suitable apparatus approved in writing by the Chief Inspector.

b)"churn" means the vessel in which the prepared cellulose pulp is treated with carbon disulphide;

c)"dumping" means the drawing off molten sulphur from the sulphur posts in the process of manufacture of carbon disulphide;

d)"efficient exhaust draught" means localised ventilation effected by mechanical means for the removal of gas or vapour, so as to prevent it as far as practicable from escaping into the air of any occupied room. No draught shall be deemed to be efficient if it fails to remove smoke generated at the point where such gas or vapour originates;

e)"fume process" means any process in which carbon disulphide or hydrogen sulphide is produced, used or given off.

f)"life belt" means a belt made of leather or other suitable material which can be securely fastened round the body with a suitable length of rope attached to it each of which is sufficiently strong to sustain the weight of a man.

g)“suspension” means suspension from employment in any fume process by written certificate in the health register in

Form 29 signed by the Certifying Surgeon, who shall have power of suspension as regards all persons employed in any such process.

2.Prohibition relating to employment women and young persons: - No women or young person shall be employed or permitted to work in any fume process or in any room in which any process is carried on.

3.Efficient exhaust draught and supply of fresh air: -

1)No churn shall be opened unless it has been previously subjected to an efficient exhaust draught so that when the churn is opened the concentration of carbon disulphide in the working room does not exceed 20 parts per million and no worker shall be allowed to introduce his head inside the churn or enter it unless the concentration of carbon disulphide fumes inside the churn is 20 parts per million or less, and unless the exhaust draught arrangement is continued so as to reduce the concentration of carbon disulphide to 20 parts per million or less so long as the worker or his head is inside the churn.

2)Hydrogen sulphide or carbon disulphide evolved in any room where any fume process is carried on shall be removed by an efficient exhaust draught.

3)When the ventilation apparatus normally required in connection with the process referred to in clause (2) is ineffective or is stopped for any purpose whatever work in the said room which is not he carried on and the worker shall be made to leave the leave the room as soon as possible but any case not later than 15 minutes after such an occurrence.

Provided that any person wearing a breathing apparatus may be allowed to remain in the said work-room.

Explanation: - The Chief Inspector may determine what constitutes normal ventilation apparatus in any given case on the representation duly made by the manager.

4)In a room where any process is carried on so that irritant of offensive fumes are emitted there shall be provided suitably placed inlets of sufficient area for the supply of fresh air to the room.

4.Air analysis: -

1)Air analysis for the measurement of concentration of carbon disulphide or hydrogen sulphide shall be carried out every eight hours or at such intervals as may be directed by the Chief Inspector at places where fume process is carried on and the result of such analysis shall be recorded in a register specially maintained for the purpose.

2)If the concentration or either carbon disulphide or hydrogen sulphide exceeds 20 parts per million, the manager shall report the concentration reached and the duration of such concentration to the Chief Inspector. The report shall state the reason for such increase.

3)On receipt of such information, the Chief Inspector may direct the manager to take such measures as he may specify in that behalf and it shall be the duty of the manager to comply with such directions.

5.Electric fitting in carbon disulphide fume process-room except the spinning room: -All electric fittings in a room in which a fume process evolving carbon disulphide is carried is carried on, other than a spinning-room, shall be of flame-proof construction and all electric conductors shall either be enclosed in metal conduits or be lead-sheathed.

6.Washing facilities: - The occupier shall provide and maintain in a clean state and in good repair, for the use of all persons employed in fume process, wash place under cover with at least one tap or stand-pipe, having a constant supply of clean water for

every five such persons, the taps, or stand-pipe being spaced not less than 120 centimetres apart with a sufficient supply of soap and clean towels.

7.Protective equipment: -

1)The occupier shall provide, maintain in good repair and keep in clean condition protective clothing and other equipment as specified in the table below: -

Table

Process	Protective clothing and other equipment
i) Dumping	Overalls face-shields, gloves and footwear all made of suitable material.
ii) Spinning	Suitable aprons and gloves.
iii)Process involving or S likely to involve contact with viscose solution.	uitable gloves and footwear.
iv) Any other process	Protective clothing and equipment as may be directed by the Chief Inspector by an order writing.

2)The occupier shall make arrangements for the examination and cleaning of the protective equipment at the close of each day's work and for the repair or replacement thereof when necessary.

8.Use of protective equipment: - Every person shall use the protective equipment provided to him under paragraph 7.

9.Storage of protective equipment: - A suitable room, rooms or lockers shall be provided exclusively for the storage of all the protective equipment supplied to employee and no such equipment shall be stored at any place other than the room, rooms or lockers so provided.

10.Mess-room: -

1)There shall be provided and maintained for the use of all the persons remaining within the premises during the meal intervals, a suitable mess-room providing accommodation of at least 10,000 square centimetres per head furnished with -

a)a sufficient number of tables and chairs or benches with back rests.

b)an arrangement for washing hands and utensils, and

c)adequate means for warming food.

2)The mess-room shall be kept under the charge of a responsible person and shall be kept clean.

11.Prohibition to smoking etc. in carbon disulphide fume process room: - No person shall smoke or carry matches, fire or naked light or other means of producing a naked light or spark in a room in which fume producing carbon disulphide is caused and notice in the language understood by the majority of the workers shall be posted in the factory prohibiting smoking and carrying of matches, fire or naked light or other means of producing light or spark into such room.

12.Prohibition to remain in fume process room: - No person during his intervals for meal or rest shall remain in any room wherein fume process is carried on.

13.Medical examination: -

1)Every person employed in a fume process shall be examined by the Factory Medical Officer once in every six months and by the Certifying Surgeon once in every 12 months or at such other intervals as may be specified in writing by

the Chief Inspector on a date or dates of which due notice shall be given to all such persons and such examination shall take place on the factory premises.

2)Every person employed in a fume process shall present himself at the appointed time for such examination.

3)A health Register containing the names of all the persons employed in a fume process shall be kept in Form 29.

4)No person, after suspension, shall be employed in a fume process without the written sanction of the Certifying Surgeon entered in the Health Register.

13 A. Medical Facilities: -

1)The occupier of the factory shall appoint at least a part-time qualified medical practitioner possessing MBBS degree and having post graduate diploma in Industrial Health or possessing MBBS degree and having five years experience in industry in industry as occupational health Physician.

The medical Practitioner so appointed shall be required to put in minimum four hours attendance on every working day in the ambulance-room for carrying out the duties specified in the following sub-paragraph (2).

Provided that, in case of factories employing less than 500 workers per day the Chief Inspector of Factories may allow attendance for shorter duration after taking into consideration all the relevant facts of each case.

2)The medical supervision of persons engaged on dangerous operations specified in rule 165 of these rules.

a)to maintain Health Register in Form 29.

b)to undertake medical supervision of persons engaged on dangerous operations specified in rule 165 of these rules.

c)to look after health, education and rehabilitation of sick, injured or affected workers.

d)to carry out inspection of work-rooms where dangerous operations are carried out and to advise the management of the measures to be adopted for protection of health of the workers involved therein.

3)For the purpose of medical supervision by the medical practitioner so appointed, the occupier shall provide for his exclusive use a room in the factory premises which shall be properly cleaned, adequately lightened, ventilated and furnished with a screen, a table with office stationary, chairs and other facilities and instruments including X-Ray arrangements for Schedules IV, X and XVII, for such examinations and such other equipments as may be prescribed by the Chief Inspector of factories from time to time.

14.Breathing apparatus and measures: -

1)There shall be provided in every factory where fume process is carried on, sufficient supply of : -

a)a breathing apparatus.

b)oxygen and suitable means of its administration, and

c)life belts.

2 (i) The breathing apparatus and other appliances shall: -

a)be maintain in good condition and kept in an ambulance room or in some other place so as to be readily available, and

b)be thoroughly inspected once every month by a competent person, appointed in writing by the occupier.

ii)A record of the condition of the breathing apparatus and other appliances shall be entered in a book provided for that purpose which shall be produced when required by an inspector.

3)Sufficient number of workers shall be trained and given a periodic refresher course in the use of breathing apparatus and respirators and artificial respiration so that at least 2 such trained persons would be available in each fume process room during all the working hours of the factory.

4)Respirators shall be kept properly labelled in clean dry, light-proof cabinets and if liable to be affected by fumes, shall be protected by suitable containers. Respirators shall be dried after use and shall be periodically disinfected.

15.Cautionary placard and instructions: - Cautionary placards in the form specified by the Chief Inspector and printed in the language of the majority of the workers employed shall be affixed in prominent places in the factory where they can be easily and conveniently read by the workers and arrangement shall be made by the occupier to instruct periodically all workers employed in a fume process regarding the health hazards connected with their duties and the best preventive measures and method to protect themselves.

16.Exemption: - If in respect of any factory, department or departments, the Chief Inspector is satisfied that all or any of the provisions of this Schedule are not necessary for the protection of the persons employed in such department or departments, he may, by certificate in writing, exempt such department or departments for all or any of such provisions subject to such conditions as he may specify therein. Such certificate may at any time be revoked by the Chief Inspector without assigning any reasons.

Schedule XV

Manufacture and manipulation of dangerous pesticides

1.Definition: - For the purpose of this Schedule: -

a)“pesticides” means agents used for the purpose of destroying or arresting the growth or increase of harmful organisms;

b)“dangerous pesticides” means insecticides as defined in section 3(e) of the Insecticides Act. 1968 (46 of 1968) or any other substance declared as dangerous pesticides by the Chief Inspector of Factories in writing;

c)“Suspension” means suspension from employment, in any process in which dangerous pesticides is used by written Certificate in the Health Register of

Form 29 signed by the Certifying Surgeon, who shall be competent to suspend all persons employed in such process.

d)"first employment" means first employment in any manufacturing process referred to in this Schedule and also re-employment in, such manufacturing process following any cessation of employment for a continuous period exceeding three calendar month;

e)"efficient exhaust draught" means localised ventilation effected by mechanical means, for the removal of gas, vapour, dust or fumes so as to prevent them from escaping into the air of any place in which work is carried on. No draught shall be deemed efficient which fails to remove smoke generated at the point where such gas, vapour, fume or dust originates;

f)"manipulation" includes mixing, blending, filling, emptying packing, handling or using of a dangerous pesticide.

2.Application: - This schedule shall apply in respect of all factories or any part thereof in which the process of manufacture or manipulation of a dangerous pesticide (hereinafter referred to as the said manufacturing process) is carried on. 3.Cautionary placard: - A cautionary placard in the form specified in Appendix attached to this Schedule and printed in the language of the majority of the workers employed, shall be affixed in prominent place frequently by them in the factory where the placards can be easily and conveniently read by the workers and arrangements shall be made by the occupier to instruct periodically all workers employed in the said manufacturing process regarding the health hazards connected with it and methods to protect themselves.

4.Prohibition relating to employment of women and young persons: - No woman or young person shall be employed or permitted to work in any room in which the said manufacturing process is carried on or in any room in which a dangerous pesticides is stored.

5.Air space: - In every room in which the said manufacturing process is carried on, there shall be atleast 15 cubic metres of air space, excluding any space occupied by machinery equipment or any other articles, for any person employed therein, and in computing this air space, no height over 3.5 metres shall not be taken into account.

6.Prohibition of the said manufacturing process without efficient exhaust draught: - The said manufacturing process shall not be carried on without the use of efficient exhaust draught when: -

a)a container holding a dangerous pesticide is emptied, or

b)a dangerous pesticide is introduced into container, tank, hopper or machine of filled in small-sized packings, or

c)a power or a liquid is prepared from a dangerous pesticide, or

d)a dangerous pesticide is blended, unless the process is completely enclosed.

7.Floor of work-room: - The floor or every work-room in which the said manufacturing process is carried on shall be: -

a)of cement or similar material so as to be smooth and impervious to water.

b)maintained in sound condition.

c)sloping and providing with gutters for adequate drainage, and

d)thoroughly washed daily by means of hose-pipe.

8.Work-benches: - The work-benches at which a dangerous pesticides manipulated shall: -

a)have smooth surface and be of non-absorbent material, preferably of stainless steel, and

b)be cleaned daily.

9.Waste: -

a)A suitable receptacle with tightly-fitting cover shall be provided and used for depositing waste like cloth, paper or other materials soiled with a dangerous pesticide.

b)All such contaminated waste shall be destroyed by burning at least once a week.

10.Empty containers used for dangerous pesticides: - Such containers shall be destroyed or thoroughly cleaned of their contents and treated with an inactivating agent before discarded.

11.Manual handing: - A dangerous pesticide shall not be required or allowed to be manipulated by hand except by means of long-handled scoop.

12.Protective clothing: -

1)Protective clothing shall be provided and maintained in good repair for all workers and such clothing shall be worn by the workers concerned. The protective clothing shall consist of: -

a)long pants and shirts or overalls with long sleeves and head coverings.

b)rubber gloves, gum boots, rubber aprons, chemical safety goggles and respirators.

Where the pesticide contains oil, the rubber gloves, boots and apron shall be of synthetic-rubber.

2)Where the worker has to handle a dangerous pesticide: -

a)containing phosphorous or nicotine, the protective clothing shall be daily both inside and outside, and if the protective clothing mentioned in clause (a) of sub-paragraph (1) is soiled with such pesticides it shall be changed immediately, and

b)not containing phosphorus or nicotine, the protective clothing mentioned in clause (a) of sub-paragraph (1) shall be washed frequently.

13.Medical examination: -

1)a) No person shall be employed in the said manufacturing process unless he has been examined by the Certifying Surgeon within seven days preceding his first employment and certified fit for such employment.

b)No person shall be employed in the said manufacturing process unless he is re-examined by the Certifying Surgeon at least once in every three calendar months.

c)The Certifying Surgeon shall examine persons employed in the said manufacturing process by giving due notice to all concerned.

d)A Health Register in Form 29 containing the names of all workers employed in the said manufacturing process shall be kept.

e)No person after suspension shall be employed without written sanction from the Certifying Surgeon entered in or attached to the Health Register. 2)The Chief Inspector may order any suitable clinical test or tests to be carried out in respect of the workers employed in any factory where the said manufacturing process is carried on at such intervals as he deems fit.

14.Medical facilities: -

1)The occupier of the factory shall appoint atleast a part time qualified medical practitioner, possessing MBBS degree and having a diploma in Industrial Health or possessing MBBS degree and having five years experience in industry as occupational health physician. The medical practitioner so appointed shall examine and, if necessary, treat on the premises of the factory all workers who handle dangerous pesticides for effects of excessive absorption at least once a week. The occupier shall make necessary arrangements to ensure quick availability of the medical practitioner so appointed or any other qualified medical practitioner in emergency cases. The medical practitioner, so appointed, shall be required to put in minimum four hours attendance on every working day in the ambulance room for carrying out the duties specified in the following sub-paragraph (2).

Provided that, in cases of factories employing less than 500 workers per day, the Chief Inspector of Factory may allow attendance for shorter duration after taking into consideration all the relevant facts of each case. 2)The medical practitioners so appointed, shall perform, in addition to the duties specified in sub-paragraph (1) the following duties, that is to say: - a)to maintain Health Register in

Form 29.

b)to undertake medical supervision of persons engaged in dangerous operations specified in rule 165 of these rules,

c)to look after health, education and rehabilitation of sick, injured or affected workers;

d)to carry out inspection of work-room where dangerous operations are carried out and the advise the management of the measures to be adopted for protection of health of the worker involved therein.

15.Time allowed for washing: - Before each meal and before the end of the day's work at least ten minutes in addition to the regular rest interval shall be allowed for washing in each person who has been employed in the said manufacturing process.

16.Washing and bathing facilities: -

1)There shall be provided and maintained in cleanly state and in good repair for the use of all persons employed, adequate washing and bathing places having a constant supply having a constant supply of water under cover at the rate of one such place for every 5 persons employed.

2)The washing places shall have stand-pipes placed at intervals of not less than one metre;

3)Not less than one half of the total number of washing place shall be provided with bath-rooms;

4)Sufficient supply of clean towels made of suitable material shall be provided;

Provided that such towels shall be supplied individually for each worker if so ordered by the Inspector;

5)Sufficient supply of soap and nail brushes shall be provided.

17.Food, drinks, etc., prohibited in work-room: - No food, drinks, pan, supari or tobacco shall be consumed or brought by any worker into any work room in which the said manufacturing process is carried on.

18.Cloak Room: - There shall be provided and maintained for the use of persons employed in the said manufacturing process: -

a)a cloak-room for clothing put off during working hours with adequate arrangements for drying clothing, if wet;

b)separate and suitable arrangements for the storage of protective clothing provided under paragraph 12.

19.Mess-room: - There shall be provided and maintained for the use of all persons, employed in the factory and remaining on the premises during the rest intervals, a suitable mess-room which shall be furnished with: -

a)sufficient tables and benches and

b)adequate means for warming food.

The mess-room shall be placed under the charge of a responsible person and shall be kept clean.

20.Exemption: - If it respect of any factory the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the process or for any other reasons all or any of the provisions of this Schedule are not necessary to the protection of the persons employed in the factory, he may by a certificate in writing exempt such factory from all or any of the provisions, on such condition as he may specify therein. Such certificate may at any time be revoked by the Chief Inspector after recording his reasons therefore.

21.Manipulation not to be undertaken :- Manipulation of a pesticide other than those mentioned in clause (b) of this Schedule shall not be undertaken in any factory unless a certificate regarding its dangerous nature or otherwise is obtained from the Chief Inspector.

List of dangerous Pesticides.

Parthion
Diazinon
Hexaethyl tetraphosphate.
Tetraethyl pyrophophate
Tetraethy ditriopyrophosphate
Demeton (systex)
Schradan (OMPR)
Para-Oxon (E.600)
Methyl Parathion.
Dimeffox
Sulphotepp

Chlordane
Endrine.
Aldrin
Dieldrin
Texaphene
Dinitro-o-cresol
Arsenical Compounds
Cryolite
Pentachlorophenol
Carbojuran
Methyl bromide EPN,
Cyanides

Nicotine or its compound.
Mercury compounds

APPENDIX X

Cautionary placard

1.Pesticides are generally poisonous substances.

2.Therefore in rooms where these are handled -

a)do not chew, eat, drink or smoke; keep food or drink away from pesticides; b)use the protective wear supplied e.g. gloves, aprons, clothes, boots, etc.

3.Before meals or when any part of the body has come in contact with the pesticides, wash with soap and water.

4.Before leaving the factory, take a bath and change your clothing.

5.Do not use any container that has contained a pesticide as a pot for food or drink. 6.Do not handle any pesticide with bare hands; use a handled scoop.

7.Avoid spilling of any pesticide on body, floor or table.

8.Maintain scrupulous cleanliness of body and clothing and of your surroundings. 9.In case of sickness like nauses, vomiting or giddiness, inform the manager who will make necessary arrangement for treatment.

SCHEDULE XVI

Compression of Oxygen and Hydrogen Produced by Electrolytic Process or by Steam iron process.

1.Definition: For the purpose of this schedule "Compression of Oxygen and Hydrogen" means any process by which oxygen or hydrogen is manufactured or evolved by electrolytic process or by steam iron process.

2.Application: This schedule applies in respect of factories or any part thereof in which the process if compression of oxygen and hydrogen is carried on.

3.Situation of electrolyser plant room etc: The room in which electrolyser plant is installed shall be separate from the plant for storing and compressing oxygen and hydrogen. The room in which electric generator and the distribution panel are installed shall not communicate with any other room in which any process is carried on.

4.Testing the purity of oxygen and hydrogen:

1)The purity of oxygen and hydrogen shall be tested by a competent person at least once in every shift, at the following points:

i)in the electrolyser room,

ii)at the gas holder inlet, and

iii)at the suction end of the compression,

Provided that where the electrolyser plant is fitted with automatic recorder of purity of oxygen and hydrogen with alarm lights, the purity of the gases may be tested likewise at the suction end of the compressor only.

2)The purity figures obtained as a result of the test shall be entered and signed by the person carrying out such test in a register, to be kept for the purpose.

5.Compression of oxygen and hydrogen prohibited in certain circumstances: Where the purity of oxygen and hydrogen as tested under paragraph 4 is found to be less than 98%, the oxygen or hydrogen shall not be subjected to the process of compression.

6.Provision of negative pressure switch: In addition to the limit switch, to switch off the compressor motor, to make it impossible to empty the gas holder to the point causing vacuum inside the gas holder, a sensitive negative pressure switch shall be provided in or adjacent to the suction main for hydrogen compressor, to switch off the compressor motor in the event of the gas holder being emptied to the extent as to cause vacuum.

7.Warning Signal: The bell of any holder shall not be permitted to go within 30 cm of its lowest position when empty and a visual and an audible warning signal shall be fitted to the gas holder to indicate that this limit is reached.

8.Purity of Raw Material: The water and caustic soda used for making lye shall be chemically pure within the pharmaceutical limits.

9.Construction of Electrical Connections: Electrical Connection at the electrolyser cells and at the electric generator terminals shall be so constructed as to preclude the possibility of wrong connections leading to the reversal of polarity. An automatic device shall be provided to cut off power in the event of reversal polarity owing to wrong connection either at the switch board or at the electric generator terminals.

10.Maintenance of Gas Pipe, Gas Holder and Compressed Gas Storage Vessels:

i)Oxygen and Hydrogen gas pipes shall be painted with distinguishing colours. In the event of leakage at the joints of the hydrogen gas pipe, holder or a storage vessel or in the event of any breakdown, the pipe and storage system after repairs and reconnections carried out as per paragraph 13 of this schedule and in accordance with the requirements of Rule 86 shall be purged of all air and gasses using a suitable inert gas, before drawing in hydrogen gas.

ii)Before drawing in hydrogen gas in any new or existing system not in use every pipe, gas holder, compressed gas vessels in the system shall be purged of all air and gases using a suitable inert gas.

11.Electrical Wiring and Other sources if Ignition: Wherever hydrogen gas is generated, compressed, transferred or stored all electrical wiring, apparatus and other installations shall be of flame proof construction. All sources of ignition shall be of prevented from being present in the above areas. A warning notice shall be exhibited to that effect at prominent place in the above areas.

12.Removal of Explosive Substances: No part of the electrolyser plant and the gas holders, and compressor shall be subjected to welding, brazing, soldering or cutting until steps have been taken to remove any explosive substance from that

part and it is rendered safe for such operation. After the completion of such operation no explosive substance shall be allowed to enter that part until the metal has cooled sufficiently to prevent risk of explosion.

13.Restriction of Operation, Repair etc. No work of operation, repair or maintenance shall be undertaken except under the direct supervision of a person who, by his training, experience and knowledge of the necessary precautions against risk of explosion is competent to supervise such work. No electric generator after erection or repairs shall be switched on to the electrolyser unless it is certified by any competent person under whose direct supervision, erection or repairs are carried out to be in a safe condition and the terminals have been checked for the polarity as required by these Rules.

14.Examination of the Paint. : Every part of the electrolyser plant and the gas holders and compressor shall be inspected, checked and overhauled in accordance with a regular schedule maintained by the manager complying with the instruction of the competent persons mentioned in paragraph 13. Every defect noticed shall be rectified forthwith.

Schedule XVII

Handling and processing of Asbestos, Manufacture of any Article of Asbestos and any other process of manufacture or otherwise in which Asbestos is used in any form.

1.Application: - This schedule shall apply to all factories or parts of factories in which any of the following processes is carried on: -

a)breaking, crushing, disintegrating, opening, grinding, mixing or sieving of asbestos and any other processes involving handling and manipulation of asbestos incidental thereto;

b)all process in the manufacture of asbestos textiles including preparatory and finishing processes;

c)making of insulation slabs or sections, composed wholly or partly of asbestos, and processes incidental thereto;

d)making or repairing of insulating mattresses, composed wholly or partly of asbestos, and processes incidental thereto;

e)manufacture of asbestos cardboard and paper;

f)manufacture of asbestos cement goods;

g)application of asbestos by spray method;

h)sawing, grinding, turning, abrading and polishing in dry state of articles composed wholly or partly of asbestos;

i)cleaning of any room, vessel, chamber, fixture of appliance for the collection of asbestos dust; and

j)any other processes in which asbestos dust is given off into the work if environment.

2.Definition: - For the purpose of this schedule: -

a)"asbestos" means any fibrous silicate mineral and any admixture containing actionolite, amosite, anthophyllite, thrysotile, crocidolite, tremolite or any mixture thereof, whether crude, crushed or opened; b)"asbestos textiles" means yarn or cloth composed of asbestos or asbestos mixed with any other material;

c)"approved" means approved for the time being inwriting by the Chief Inspector;

d)"breathing apparatus" means a helmet or face piece with necessary connection by means of which a person using it breathes air free from dust, or any other approved apparatus;

e)"efficient exhaust draught" means localised ventilation by mechanical means for the removal of dust so as to prevent dust from escaping into air of any place in which work is carried on. No draught shall be deemed to be efficient which fails to control dust produced at the point where such dust originates,

f)"preparing" means crushing, disintegrating and any other process in or incidental to the opening of asbestos;

g)"protective clothing" means overalls and head covering which (in either case) will when worn exclude asbestos dust.

3.Tools and Equipment: - Any tools or equipment used in processes to which this schedule applied shall be such that they do not create asbestos dust above the permissible limit or are equipped with efficient exhaust draught.

4.Exhaust draught: -

1)An efficient exhaust draught shall be provided and maintained to control dust from the following process and machines;

a)manufacture and conveying machinery namely;

i)preparing, grinding or dry mixing machines;
ii)carding, card waste and ring spinning machines and looms;
iii)machines or other plant fed with asbestos and
iv)machines used for the sawing, grinding, turning, drilling, abrading or polishing, in the dry state of articles composed wholly or partly of asbestos;

b)cleaning and grinding of the cylinders or other parts of a carding machine.

c)chambers, hoppers or other structures into which loose asbestos is delivered or passes;

d)work-benches for asbestos waste sorting or for other manipulation of asbestos by hand;

e)work place at which the filling or emptying of sacks, skips or other portable containers, weighing or other process incidental thereto which is effected by hand, is carried on;

f)sack cleaning machines;

g)mixing and blending of asbestos by hand; and

h)any other process in which dust is given off into the work environment.

2)Exhaust ventilation equipment provided in accordance with sub-paragraph (1)shall while any work of maintenance or repair to the machinery, apparatus or other plant or equipment in connection with which it is provided is being carried on, kept in use so as to produce an exhaust draught which prevents the entry of asbestos dust into the air of any work place.

3)Arrangements shall be made to prevent asbestos dust discharged from exhaust apparatus being drawn into the air of any workroom.

4)The asbestos bearing dust removed from any workroom by the exhaust system shall be collected in suitable receptacles or filter bags which shall be isolated from all work areas.

5.Testing and examination of ventilating systems: -

1)All ventilation systems used for the purpose of extracting or suppressing dust as required by this schedule shall be examined and inspected once every week by a responsible person. It shall be thoroughly examined and tested by a competent person once in every period of 12 months. Any defects found by such examinations or test shall be rectified forthwith.

2)A register containing particulars of such examination and tests and the state of the plant and the repair to the machinery, apparatus or other plant or equipment in connection with which it is provided is being carried on, be kept in use so as to produce an exhaust draught which prevents the entry of asbestos dust into the air of any work place.

3)Arrangements shall be made to prevent asbestos dust discharged from exhaust apparatus being drawn into the air of any workroom.

4)The asbestos bearing dust removed from any workroom by the exhaust system shall be collected in suitable receptacles or filter bags which shall be isolated from all work areas.

5.Testing and examination of ventilating system: -

1)All ventilation systems used for the purpose of extracting or suppressing dust as required by this schedule shall be examined and inspected once every week by a responsible person. It shall be thoroughly examined and tested by a

competent person once in every period of 12 months. Any defects found by such examinations or test shall be rectified forthwith.

2)A register containing particulars of such examination and tests and the state of the plant and repairs or alteration (if any) found to be necessary shall be kept and shall be available for inspection by an inspector.

6.Segregation in case of certain process: - Mixing or blending of asbestos by hand, or making or repairing of insulating mattresses composed wholly or partly of asbestos shall not be carried on in any room in which any other work is done.

7.Storage and distribution of loose asbestos: - All loose asbestos shall while not in use be kept in suitable closed receptacles which prevent the escape of asbestos dust there from such asbestos shall not be distributed within a factory except in such receptacles or in a totally enclosed system of conveyance.

8.Asbestos sacks: -

1)All sacks used as receptacles for the purpose of transport of asbestos within the factory shall be constructed of impermeable materials and shall be kept in good repair.

2)A sack which has contained asbestos shall not be cleaned by hand beating but by a machine, complying with paragraph 3.

9.Maintenance of floors and workplaces: -

1)In every room in which any of the requirements of this scheme apply-

a)the floors, work-benches, machinery and plant shall be kept in a clean state and free from asbestos debris and suitable arrangements shall be made for the storage of asbestos not immediately required for use; and

b)the floors shall be kept free from any materials, plant or other articles not immediately required for the work carried on in the room, which would obstruct the proper cleaning of the floor.

2)The cleaning as mentioned in sub-rule(1) shall so far as is practicable, be carried out by means of vacuum cleaning equipment so designed and constructed and so used that asbestos dust neither escape nor is discharged into the air of any work-place.

3)when the cleaning is done by any method other than that mentioned in sub-paragraph (2), the persons doing cleaning work and any other person employed in that room, shall be provided with respiratory protective clothing.

4)The vacuum cleaning equipment used in accordance with provisions of sub-paragraph (2), shall be properly maintained and after each cleaning operation, its surface kept in a clean state and free from asbestos waste and dust.

5)Asbestos waste shall not be permitted to remain on the floors or other surfaces at the work place at the end of the working shift and shall be transferred without delay to suitable receptacles. Any spillage of asbestos waste occurring during the course of the work at any time shall be removed and transferred to the receptacles maintained for the purpose without delay.

10.Breathing apparatus and protective Clothing: -

1)An approved breathing apparatus and protective clothing shall be provided and maintained in good conditions for use of every persons employed.

a)in chambers containing loose asbestos;

b)in cleaning, dust settling or filtering chambers of apparatus;

c)in cleaning the cylinders, including the doffer cylinders, or other parts of a carding machine by means of hand-strickles;

d)in filling, beating, or levelling in the manufacture or repair of

insulating mattress, and

e)in any other operation or circumstance in which it is impracticable to adopt technical means to control asbestos dust in the work environment within the permissible limit.

2)Suitable accommodation in conveniently accessible position shall be provided for the use of persons when putting on or taking off breathing apparatus and protective clothing provided in accordance with this rule and for the storage of such apparatus and clothing when not in use.

3)All breathing apparatus and protective clothing when not in used shall be stored in the accommodation provided in accordance with sub-rule (2) above.

4)All protective clothing in use shall be de-dusted under an efficient exhaust draught or by vacuum cleaning and shall be washed at suitable intervals.
The cleaning schedule and procedure should be such as to ensure the efficiency in protecting the wearer.

5)All breathing apparatus shall be cleaned and disinfected at suitable intervals and thoroughly inspected once every month by a responsible person.

6)A record pf the cleaning and maintenance and of the condition of the breathing apparatus shall be maintained in a register provided for that purpose which shall be readily available for inspection by an Inspector.

7)No persons shall be employed to perform any work specified in sub-paragraph (1) for which breathing apparatus is necessary to be provided under that sub-paragraph unless he has been fully instructed in the proper use of that equipment.

8)No breathing apparatus provided in pursuance of sub-paragraph (1) which has been worn by a person shall be worn by another persons unless it has been thoroughly cleaned and disinfected since use of that equipment.

11.Separate accommodation for personal clothing: - A separate accommodation shall be provided in conveniently accessible position for all persons employed in operations to which this schedule applies for storing of personal clothing. This should be separated from the accommodation provided under sub-paragraph (2) to prevent contamination of personal clothing.

12.Washing and bathing facilities: -

1)There shall be provided and maintained in clean stage and in good repair for the use of all workers employed in the processes covered by the schedule, adequate washing and bathing places having a constant supply of water under cover at the rate of one such place for every 15 persons employed.

2)The washing places shall have standpipes placed at intervals of not less than one metre.

3)Not less than one half of the total number of washing places shall be provided with bathrooms.

4)Sufficient supply of clean towels made of suitable material shall be provided.
Provided that such towels shall be supplied individually for each worker if so ordered by the Inspector.

5)Sufficient supply of soap and nail brushes shall be provided.

13.Messroom: -

1)There shall be provided and maintained for the use of all workers employed in the factory covered by this schedule, remaining on the premises during the rest intervals, a suitable messroom which shall be

furnished with;

a)sufficient tables and benches with back rest, and

b)adequate means of warming food.

2)The messroom shall be placed under the charge of a responsible person and shall be kept clean.

14.Prohibition of employment of young persons: - No young person shall be employed in any of the process covered by this schedule.

15.Prohibition relating to smoking: - No person shall smoke in any area where processes covered by this schedule are carried on. A notice in the language understood by majority of the workers shall be posted in the plant prohibiting smoking at such areas.

16.Cautionary Notice: -

1)Cautionary notices shall be displayed at the approaches and along per metre of every asbestos processing area to warn all persons regarding: -

a)hazaros to health from asbestos dust.

b)need to use appropriate protective equipment;

c)prohibition of entry to unauthorised persons or authorised persons but without protective equipment.

2)Such notice shall be in the language understood by the majority of the workers.

17.Air monitoring: - To ensure the effectiveness of the control measures, monitoring of asbestos fibre in air shall be carried out once atleast in every shift and the record of the results so obtained shall be entered in a specially maintained for the purpose.

18.Medical examination: -

a)No worker shall be employed in any factory on any of the processes specified in clause 1, unless he has been medically examined by the Medical Inspector of Factories/ certifying Surgeon and has been declared fit and granted a certificate of fitness in

Form 28.

b)Every worker employed on any of the aforesaid processes on the date on which the Schedule comes into force shall be radiologically examined by the qualified radiologist at the cost of the occupier and the standard size-X-ray plate shall be submitted to the Medical Inspector of Factories/ Certifying Surgeon for medical examination within three months of the said date.

c)Every worker employed on any of the aforesaid processes shall be medically examined by the Medical Inspector of Factories/ Certifying Surgeon at intervals of twelve months after the first medical examination conducted under sub-clauses (a) and (b). If at any time the Medical Inspector of Factories/ Certifying Surgeon is of the opinion that the person employed in the said process shall be examined radiologically by a qualified radiologist, he may direct the occupier to arrange for such examination at his cost and then to submit the standard size chest-X-ray.

Plate of the worker to the Medical Inspector of Factories/ Certifying Surgeon.

d)A worker already in employment and declared unfit by the Medical Inspector of Factories/ Certifying Surgeon shall not be allowed to work on any of the processes specified in clause (1), unless he has been examined again along with standard size chest X-ray plate from a qualified radiologist at the cost of the occupier and has been certified to be fit to work on the said processes again.

e)A worker declared to be unfit to work on any of the aforesaid processes, a may be employed on such other work on process as may be considered safe and as may be advised by the Medical Inspector of Factories/ Certifying Surgeon;

f)The Medical Inspector of Factories/ Certifying Surgeon may direct that a worker may be X-rayed or he may be subjected to further examination by a specialist or to any other examination clinical, pathological or otherwise or that he should undergo a specified treatment, and it shall be the responsibility of the employer (occupier and manager) to arrange for the specified examined and/ or treatment and to bear all expenses thereof or in connected therein.

g)The Certifying Surgeon shall after each examination grant a certificate in

Form 28.

h)The manager shall maintain all the certificates in a proper register or file and shall produce all the certificates before an Inspector whenever demanded.

i)The manager shall maintain the detail of every Medical Examination in

Form 29 and the register shall be produced before an Inspector whenever demanded. The register shall be maintained upto a minimum period of 40 years from the beginning of the employment whichever is later.

19.Medical facilities: -

1)The occupier of the factory shall appoint at least a part-time qualified medical practitioner, possessing MBBS degree and having post-graduate diploma in Industrial Health or possessing MBBS degree and having five years experience in Industry as occupational health physician. The medical practitioner so appointed shall be required to put in minimum four hours attendance on every working day in the ambulance room for carrying out the duties specified in the following sub-paragraph (2).

Provided that, in cases of factories employing less than 500 workers per day, the Chief Inspector of Factories may allow attendance for shorter duration after taking into consideration all the relevant facts of each case.

2)The medical practitioner so appointed shall perform the following duties that is to say;

a)to maintain Health Register, in Form 29.

b)to undertake medical supervision of persons employed in the factory.

c)to look after health, education and rehabilitation of sick, injured or affected workers;

d)to carry out inspection of work-rooms where dangerous operations are carried out and to advise the management of the measures to be adopted for protection of health of the workers involved therein.

3)For the purpose of medical supervision by the medical practitioner so appointed the occupier shall be provided for his exclusive use a room in the factory premises which shall be properly cleaned, adequately lighted, ventilated and furnished with a screen, a table with office stationary, chairs and other facilities and instruments including X-ray arrangement for such examinations and such other equipments as may be prescribed by the Chief Inspector from time to time.

20.Exemptions: - If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the processes or for any other reasons all or any of the provisions of this schedule is not necessary for protection of the workers, in the factory, the Chief Inspector may by a certificate in writing which he may at his discretion revoke at any time, exempt such factory from all or any of such provisions subject to such conditions., if any, as he may specify therein.

Schedule XVIII

Manufacture or Manipulation of Manganese and its Compound

1.Definition: For the purpose of this schedule: -

a)"Manganese Process" means processing, manufacture or manipulation of manganese or any compound of manganese or any ore or any mixture containing manganese.

b)"First Employment" means first employment in ay manganese process and includes also re-employment in any manganese process following any cessation of employment for a continuous period exceeding 3 calendar months.

c)"Manipulation" means mixing, blending, filling, emptying, grinding, sieving, drying, packing sweeping or otherwise handling of manganese or a compound of manganese, or an ore mixture containing manganese.

d)"Efficient Exhaust Draught" means localised ventilation effected by mechanical means for the removal of dust or fume or mist at its source of origin so as to prevent it from it from escaping into the atmosphere of any place where any work is carried on. No draught shall be deemed to be efficient which fails to remove dust or fume or mist at the point where it is generated and fails to prevent it from escaping into and spreading into the atmosphere of a work place.

2.Application: - The schedule shall apply to every factory in which or in an part of which any manganese process is carried on.

3.Exemption: - If in respect of any factory, the Chief Inspector is satisfied that owing to any exceptional circumstances, or infrequency of the process, or for any other reason, application of all or any of the provisions of this schedule is not necessary for the protection of the persons employed in such factory he may by an order in writing which he may at his discretion revoke, exempt such factory from all or any of the provisions on such conditions and for such period as he may specify in the said order.

4.Isolation of process: - Every manganese process which may give rise to dust, vapour or mist containing manganese, shall be carried on in a totally enclosed system or otherwise effectively isolated from other process so that other plants and processes and other parts of the factory and persons employed on other work or process may not be affected by the same.

5.Exhaust draught: - No process in which any dust, vapour or mist containing manganese is generated shall be carried out except under an efficient exhaust draught which shall be applied as near to the point of generation as practicable.

6.Medical facilities:

1)The occupier of the factory shall appoint a qualified Medical Practitioner whose appointment shall be subject to confirmation by the Chief Inspector. The qualified Medical Practitioner so appointed shall be called Appointed Doctor (Appointed Doctor shall be required to put in minimum four hours attendance on every working day in the ambulance room for carrying out the duties specified in the following sub-paragraphs (3) (4) and (5).

Provided that, in the case of factories employing less than 500 workers per day, the Chief Inspector of Factories may allow attendance for shorter duration after taking into consideration all the relevant facts of each case.

2)The occupier shall provide for the purpose of Medical Examination a room at the factory premises for exclusive use by appointed doctor. The rooms so provided shall be properly clean, (with writing materials), chairs and facilities shall instruments for

examination and investigation. Such facilities shall be subject to approval by the Medical Inspector of Factories.

3)The appointed doctor shall carry out pre-employment examination of every persons intended to be employed in manganese process. All workers employed in manganese process shall be examined by the appointed doctor at an interval not exceeding three months and records of such examination shall be maintained in Form approved by the Chief Inspector shall be made available to any Inspector on demand.

4)The occupier and the appointed doctor of the factory shall notify forthwith any case or suspected case of poisoning by manganese to the Chief Inspector and Medical Inspector.

5)In addition to the duties specified in sub paragraph 3 & 4, the appointed doctor shall perform the following duties, that is to say: -

a)to maintain Health Register in

Form 29.

b)to undertake medical supervision of persons engaged in dangerous operations specified in Rule 165 of these Rules;

c)to look after health, education and rehabilitation of sick, injured and affected workers;

d)to carry out inspection of work rooms where dangerous operations are carried out and to advise the management of the measures to be adopted for protection of health of the workers involved therein.

7.Medical Examination:

1)Every person employed in a manganese process shall be medically examined by Medical Inspector of Factories and/ or Certifying Surgeon within14 days of his first employment and thereafter at intervals of not more than six months.

2)If a person medically examined is found fit for employment on manganese process, the Medical Inspector/ Certifying Surgeon shall grant a certificate of fitness in

Form 28 which shall be kept in the custody of the Manager of the Factory. The certificate shall be readily produced by the manager whenever required by an Inspector and the person granted such a certificate shall be provided with a token made of metal with the number of the certificate inscribed thereon and said person shall always carry said token on the person while at work.

3)If a person found unfit for work in any manganese process the Medical Inspector of Factories/ Certifying Surgeon shall grant a certificate to that effect and such person shall not be allowed to work in ay manganese process.

4)If the Medical Inspector/ Certifying Surgeon finds that any worker who had been granted a certificate of fitness at a previous medical examination is no longer fit to be employed on any manganese process, he may revoke the previous certificate and no person whose certificate of fitness has been revoked shall be allowed to work on any manganese process. The medical Inspector/ Certifying Surgeon may requires such person to be produced before him for fresh medical examination after such period as he may specify in writing on the revoked certificate and in the Health Register in

Form 29.

5)If the Medical Inspector/ Certifying Surgeon is of the opinion that person had become permanently unfit for employment on any manganese process he shall make an entry to that effect in the certificate and in the Health Register and no such person shall be allowed to work in any manganese process.

6)If the Medical Inspector/ Certifying Surgeon is of the opinion that any special expert examination or test is necessary for a proper diagnosis in a doubtful case, he may direct the manager and/ or the Occupier to get the worker examined by such expert, or to get such tests carried out as may be specified by him and the Manager of the Occupier as the case may be shall comply with the direction given within a specified time and produce the report of examination or test as the case may be before the Medical Inspector/ Certifying Surgeon.

7)If the Medical Inspector/ Certifying Surgeon is of the opinion that any person is not fit for employment in any manganese process but is fit to be employed on any other work he may advise the Manager or the Occupier to employ the said person on such other job as may be safe for him. The Medical Inspector/ Certifying Surgeon may advise the worker to undergo such treatment as he may consider necessary.

8)If any person has any doubt regarding the diagnosis or decision of the Medical Inspector/ Certifying Surgeon, he may make an appeal to the Chief Inspector of Factories/ and the Chief Inspector may refer the case to the Medical Inspector or to a Medical Committee constituted by him for this purpose of which the Medical Inspector shall be a member. The decision of the Medical Inspector of the Committee as the case may be shall be final in the matter.

8.Personal Protective Equipment: -

1)The Occupier of the factory shall provide and maintain in good and clean condition suitable overalls and coverings for all persons employed in any manganese process and such overalls and head coverings shall be worn by the persons while working on a manganese process.

2)The Occupier of the factory shall suitable respiratory protective equipment for use by workers in emergency to prevent inhalation of dusts, fumes or mists. Sufficient number of complete sets of such equipment shall always be kept near the work place and the same shall be properly maintained and kept always in a condition to be used readily.

3)The occupier shall provide and maintain for the use of all persons employed, suitable accommodation for the storage and make adequate arrangements for cleaning and maintenance of personal protective equipments.

9.Prohibition relating to women and young persons: - No women or young persons shall be employed or permitted to work in any manganese process.

10.Food, drinks prohibited in work-room: - No food, drinks, pan and supari or tobacco shall be allowed to be brought into or consumed by any worker in any work-room in which any manganese process is carried on.

11.Mess room: - There shall be provided and maintained for the use of persons employed in a manganese process a suitable mess room which shall be furnished with sufficient tables and benches and adequate means for warming of food. The mess room shall be placed under the charge of responsible person and shall be kept clean.

12.Washing and bathing facilities: - The following washing and bathing facilities shall be provided and maintained in clean state and in good repair for the use of all persons

employed in manganese process: -

a)A wash place under cover with clean towels, soap and nail brushes and with at least one stand pipe for every ten such persons having constant supply of water.

b)50 percent of the stand pipes provided under item(s) above may be located in bathroom where water shall be made available during the working hours of the factory and for one hour thereafter.

c)Clean towels to be provided individually to each worker and supply hot water of so ordered by an inspector.

d)In addition to taps mentioned under item(a) one stand pipe in which warm water is made available to the provided on each floor.

13.Cloak-room: - If the Chief Inspector so requires, there shall be provided and maintained for the use of persons employed in manganese process a cloak room for clothing put of during working hours with adequate arrangement for drying the clothing.

14.Cautionary placard and instructions: - Cautionary notices in the following form and printed in the language of the majority of the workers employed shall be affixed in prominent places in the factory where they can be easily and conveniently read by the workers and arrangement shall be made by the occupier to instruct periodically all workers employed in a manganese process regarding the health hazards connected with their duties and best preventive measures and methods to protect themselves. The Notice shall always be maintained in a legible condition: -

Cautionary Notice

Manganese and Manganese Compounds

1.Dust, fumes and mists of manganese and compounds are toxic when inhaled or ingested.

2.Do not consume food or drink near the work place.

3.Take a good wash before taking meals.

4.Keep the working area clean.

5.Use the protective clothing and equipments provided.

6.When required to work in situations where dust, fumes or mists are likely to be inhaled, use respiratory protective equipment provided for the purpose.

7.If you get severe headaches, prolonged sleeplessness or abnormal sensations on the body, report to the Manager who would make arrangement for your examination and treatment.

Schedule XIX

Carbon di-Sulphide Plants

1.Application : This schedule shall apply to all electric furnaces in which carbon di-sulphide is generated and all other plants where carbon di-sulphide after generation, is condensed, refined and stored.

This rules are in addition to and not in derogation of any of the provisions of the Act and Rules made there under.

2.Construction, Installation and Operation:

a) the buildings in which electric furnaces are installed and carbon di-sulphide after generation is condensed and refined shall be segregated from other parts of the factory and shall be of open type to ensure optimum ventilation and the plant lay out shall be such that only a minimum number of workers are exposed to the risk of any fire or explosion at one time.

b)Every electric furnace and every plant in which carbon di-sulphide is condensed, and refined and stored with all their fittings and attachments shall be of good construction, sound material and of adequate strength to sustain the internal pressure to which the furnace or the plant may be subjected and shall be so designed that carbon di-sulphide liquid and gas are in closed system during their normal working.

c)The electric furnace supports shall be firmly and adequately grouted in concrete or by other effective means.

d)Every electric furnace shall be installed and operated according to manufacturer's instructions and these instructions shall be clearly imparted to the personnel in charge of construction and operation.

e)The instructions regarding observances of correct furnace temperature, sulphur doze, admissible current/power consumption and periodical checking of charcoal level shall be strictly complied with.

3.Electrodes:

a)Where upper ring electrode(s), made of steel are used in the electric furnace, they shall be seamless tube construction and shall have arrangements for being connected to cooling water system through a siphon built in the electrodes or through a positive pressure water pump.

b)The arrangements for cooling water referred to in clause (a) shall be connected with automatic alarm system which will actuate in the event of interruption of cooling water in the electrodes and give visible and audible alarm signals in the control room and simultaneously stop power supply for the furnace operation and to stop the further supply of water. The alarm system and the actuating device shall be checked every day.

4.Maintenance of charcoal level:- It shall be ensured that the electrodes are kept covered with charcoal bed when the furnace is in operation.

5.Charcoal separator:- An effective arrangement shall be provided to prevent entry of pieces of charcoal into the condensers and piping.

6.Rupture discs and safety seal:-

a)At least two rupture discs of adequate size which shall blow off at a pressure twice the maximum operating pressure shall be provided on each furnace and shall either be mounted directly on the top of the furnace or each through an independent pipe as close as possible to the furnace.

b)A safety water seal shall be provided and tapped from a point between the off take pipe from the electric furnace and sulpher separator.

7.Pyrometers and Manometers:

a)Each electric furnace shall be fitted with adequate number of pyrometers to indicate temperature as near to the correct figures as practicable, at various points in the furnace. The dials for reading the temperatures shall be located in the control room.

b)Monometer or any other suitable device shall be provided for indicating pressure-

i)in the off take pipe before and after the sulphur separator, and

ii)in primary and secondary condensers.

8.Prevention of Back flow of Gas:

i)All piping carrying carbon di sulphide shall be fitted with check valves, water peals or some other effective devices at suitable position so as to prevent gas from flowing back into any electric furnaces in the event is shutdown.

ii)Overhead storage tank(s) of adequate capacity shall be provided to ensure supply of cooling water by direct gravity feed to the condensers in case of emergency such as power shutdown etc. At least for the duration during which it would be possible to initiate and complete procedures for the shutdown of the furnace.

9.Inspection and maintenance of electric furnace: a) Every electric furnace shall be inspected internally by a competent person;

i)before being placed in service after installation,

ii)before being placed in service after reconstruction or repair, and

iii)periodically every time the furnaces are opened for cleaning or dashing

or for replacing electrodes.

b)When electric furnace is shutdown fro cleaning or deashing:

i)the brick lining shall be checked for continuity and any part found defective removed.

ii)after removal of any part of the lining, referred to in (a) the conditions of the shell shall be closely inspected; and

iii)any places

forming shell found corroded to the extent that safety of the furnace is endangered shall be replaced.

10.Maintenance of Records: The following hourly records shall be maintained in log book:

i)Manometer readings at the points specified in 7(b)(i) and (ii).

ii)Gas temperature indicated by pyrometers and all other vital points near the sulphur separator and primary and secondary condensers.

iii)Water temperature and flow of water through the siphon in the electrodes, provided that where there is a system for positively ensuring more than the minimum requirement of water flow through siphon system and where an arrangement is also available for an instaneous cut off of power where ever there is low flow of water, the provisions of the sub clause may not apply, iv)Primary and secondary voltages, current and energy consumed.

11.Electrical apparatus, wiring and fittings:- All buildings in which carbon di-sulphide is refined or stored shall be provided with electrical apparatus, wiring and fittings which shall afford adequate protection from the fire and explosion.

12.Prohibition relating to smoking:- No person shall smoke or carry matches, fire or naked light or other means of producing a naked light or spark in buildings in which carbon di-sulphide is refined or stored, and a notice in the language understood by a majority of the workers shall be pasted in the plant prohibiting smoking and carrying of matches, fire or naked light or other means of producing naked light or spark into such rooms.

13.Means of escape:- Adequate means of escape shall be provided and maintained to enable persons to move to sage place as quickly as possible in case of an emergency. At least two independent staircases of adequate width shall be provided in every building housing the furnaces at reasonable intervals at opposite ends. These shall always be kept clear of all obstructions and so designed as to afford easy passage.

14.Warning in case of fire:- There shall be adequate arrangement for giving warnings in case of fire or explosion which shall operate on electricity and in case of failure of electricity by some mechanical means.

15.Fire-fighting equipment:-

a)Adequate number of suitable fire extinguisher or other fire-fighting equipment shall be kept in constant readiness for dealing with risks, involving and depending on the amount and nature of materials stored.

b)Clear instructions as to how the extinguishers or other equipment should be used printed in the language which the majority of the workers employed understand, shall be affixed to each extinguisher or other equipment and the personnel trained in their use.

16.Bulk-sulphur:-

a)Open or semi-enclosed spaces for storage of bulk sulphur shall be sited with due regard to danger which may arise from sparks given off by nearby locomotives etc. and precautions shall be taken to see that flames, smoking and matches and other sources of ignition do not come in contact with the clouds of dust arising during handling of bulk sulphur.

b)All enclosures for bulk sulphur shall be of non-combustible construction, adequately ventilated and so designed as to provide a minimum of ledges on which dust may lodge.

c)The bulk sulphur in the enclosures shall be handled in such a manner as to minimize the formation of dust clouds and no flame, smoking or matches or other sources of ignition shall be employed during its handling.

d)No repairs involving flames, heat or use of hand or power tools shall be made in the enclosure where bulk sulphur is stored.

17.Liquid sulphur:- Open flames, electric sparks and other sources of ignition, including smoking and marches, shall be excluded from the vicinity of molten sulphur.

18.Training and supervision:-

a)All electric furnaces and all plants in which carbon di-sulphide is concerned, refined or stored shall be under adequate supervision at all times while the furnaces and plant are in operation.

b)Workers in-charge of operation and maintenance of electric-furnaces and the plants shall possess qualifications at least equivalent to High School Leaving Certificate Examination and shall also be adequately trained.

19.Washing facilities:- The occupier shall provide and maintain in a clean state and in good repair, for the use of all persons employed wash place under cover with at least one tap or stand pipe, having a constant supply of clean water for every five such persons, the taps or stand-pipes being spaced not less than 120 centimetres apart with a sufficient supply of soap and clean towels provided that towels shall be supplied individually to each worker if so ordered by Inspector.

All the workers employed in the sulphur storage, handling and melting operations shall be provided with a nail brush.

20.Personal protective equipment:-

a)Suitable goggles and protective clothing consisting of overalls without pockets, gloves and foot-wear shall be provided for the use of operatives:-

i)when operation valves or cocks controlling fluids etc.

ii)drawing off of molten sulphur from sulphur pots, and

iii)handling charcoal or sulphur.

b)Suitable respiratory protective equipment shall be provided and stored in the appropriate place for use during abnormal conditions or in an emergency.

c)A arrangement shall be made for the proper and efficient cleaning of all such protective equipment.

21.Cloak-room:- There shall be provided and maintained for the use of all persons employed in the processes a suitable cloak room for clothing put off during work hours and a suitable place separate from the cloak room for the storage of overalls or working clothes. The accommodation so provided shall be placed in the charge of a responsible person and shall be kept clean.

22.Unauthorized persons:- Only maintenance and repair personnel, persons directly connected with the plant operation and those accompanied by authorized persons shall be admitted into the plant.

Schedule XX

Benzene

1.This schedule is made to provide protection against hazards of poisoning from benzene and shall apply in respect of factories or parts thereof in which benzene or substances containing benzene are manufactured, handled or used.

2.Definitions:- For the purpose of this schedule:-

a)“Substances containing benzene” means substances wherein benzene content exceeds 1 per cent by volume.

b)"Substitute" means a chemical which is harmless or less harmful than benzene and can be used in place of benzene.

c)"Enclosed system" means a system which will not allow escape of benzene vapours to the working atmosphere.

d)"Efficient exhaust draught" means localised ventilation effected by mechanical means for the removal of gases, vapours and dusts or fumes so as to prevent them from escaping into the air of any work room. No draught shall be deemed to be efficient if it fails to remove smoke generated at the point where such gases, vapour, fumes or dusts originate.

3.Prohibition and substitution

a)Benzene or substances containing benzene shall not be used as a solvent or diluents unless the process in which it is used is carried on in an enclosed system or unless the process is carried on in a manner which is considered equally safe as if it were carried out in an enclosed system.

Use of benzene and substances containing benzene is prohibited in the following processes, namely;

i)manufacture of varnishes, paints and thinners;

ii)cleaning and degreasing operations.

b)Where suitable substitutes are available, they shall be used instead of benzene or substances containing benzene. This provision, however, shall not apply to the processes specified in Appendix A.

c)The Chief Inspector may, subject to confirmation by the State Government, permit exemptions from the percentage laid down in clause 2(a) and also from the provisions of sub-clause(b) temporarily under conditions and within limits of time to be determined after consultation with the employers and workers concerned.

4.Protection against inhalation:-

a)The process involving the use of benzene or substances containing benzene shall as far as practicable be carried out in an enclosed system.

b)Where, however, it is not practicable to carry out the process in an enclosed system, the workroom in which benzene or substances containing benzene are used shall be equipped with an efficient exhaust draught or other means for the removal of benzene vapours to prevent their escape into the air of the work room so that the concentration of benzene in the air does not exceed 25 parts per million by volume or 80mg/m3.

c)Air analysis for the measurement of concentration of benzene vapours in air shall be carried out every 8 hours or at such intervals as may be directed by the Chief Inspector at places where process involving use of benzene is carried on and the result of such analysis shall be recorded in a register specially maintained for this purpose. If the concentration of benzene vapours in air as measured by air analysis, exceeds 25 parts per million by volume or 80 mg/m3 the Manager shall forthwith report the concentration to the Chief Inspector stating the reasons for such increase. d)Workers who for special reasons are likely to be exposed to concentration of benzene in the air of the workroom exceeding the maximum referred to in clause (b) shall be provided with the suitable respirators or face masks. The duration of such exposure shall be limited as far as possible.

5.Measure against skin contact:-

a)Workers who are likely to come in contact with liquid benzene or

substances containing benzene shall be provided with suitable gloves, aprons, boots and where necessary vapour tight chemical goggles, made of materials not affected by benzene or its vapours.

b)The protective wear referred to in sub-clause a) shall be maintained in good condition and inspected regularly.

6.Prohibition relating to employment of women and young persons:-

No women or young person shall be employed or permitted to work in any workroom involving exposure to benzene or substances containing benzene.

7.Labelling:- Every container holding benzene of substances containing benzene shall have the word "Benzene" and approved danger symbols clearly visible on it shall also display information on benzene content, warning about toxicity and warning about in flammability of the chemical.

8.Improper use of Benzene:-

a)The use of benzene or substance containing benzene by workers for cleaning their hands or their work clothing shall be prohibited.

b)Workers shall be instructed on the possible dangers arising from such misuse.

9.Prohibition of consuming food, etc. in work-room:- No workers shall be allowed to store or consume food or drink in the work room in which benzene or substances containing benzene are manufactured, handled or used. Smoking and chewing tobacco or pan shall be prohibited in such work-room.

10.Instructions as regards risk:- Every worker on his first employment shall be fully instructed on the properties of benzene or substances containing benzene which he has to handle and of the dangers involved. Workers shall also be instructed on the measures to be taken to deal with an emergency.

11.Cautionary notices:- Cautionary notices in the form specified in Appendix B and presented in the language easily read and understood by the majority of the workers shall be displayed in prominent places in the workrooms where benzene are manufactured, handled or used.

12.Washing and bathing facilities:-

i)The following washing facilities and bathing facilities shall be provided and maintained in cleanly state and in good repair for the use of all persons employed in operations which involves manufacture, handling or use of Benzene or substances containing Benzene:-

a)A wash-place under cover with clean towels, soap and nail brushes and with at least one stand pipe for every ten persons having constant supply of water.

b)50 per cent of the stand pipes provided under item (a) above to be located in bathroom. Water shall be made available during the working hours of the factory and for one hour thereafter.

c)Clean towels to be provided individually to each worker and supply of hot water if so ordered by an Inspector.

d)In addition to taps mentioned under item(a) one stand pipe in which warm water is made available to be provided on each floor.

ii)Cloak room:- A cloak room with lockers for each worker, having two compartments one for street-clothing and one for work clothing, shall be provided.

iii)Mess room:- A mess room furnished with tables and benches with means for warming food shall be provided and where a canteen or other proper

arrangements exist for the workers to take their meals, the requirements of mess room may be dispensed with.

13.Medical examination:-

a)Every worker who is to be employed in processes involving use of benzene or substances containing benzene, shall undergo-

i)a thorough pre-employment medical examination including a blood test for fitness for employment by a Medical Inspector/Certifying Surgeon.

ii)periodical medical examination including blood test and other biological tests at intervals of every 6 months by the factory medical officer with the assistance of a laboratory.

b)Certificates of pre-employment medical examination and periodical medical examination including test, shall be entered in a health Register in Form 29 andMedical Inspector of Factories/Certifying Surgeon may grant Certificate in Form 28 which shall be produced on demand by an Inspector.

c)If the factory medical officer on examination at any time is of the opinion that any worker has developed signs or symptoms of benzene exposure, he shall make a record of his findings in the said register and inform the Manager in writing.

On receipt of the information from the factory medical officer, the Manager of the factory shall send the worker so found exposed, to the Medical Inspector/Certifying Surgeon who shall after satisfying himself with the findings of the factory medical officer and conducting necessary examinations, issue orders of temporary shifting of the worker or suspension of the worker in the process.

d)The medical examination shall be arranged by the occupier or manager of the factory and the worker so examined shall not bear any expenses for it.

13A. Medical facilities:-

1)The occupier or the factory shall appoint at least a part-time qualified medical practitioner, possessing MBBS degree and having a diploma in Industrial Health or possessing MBBS degree and having five years experience in industry as occupational health physician. The medical practitioner so appointed shall be required to put in minimum four hours attendance on every working day in the ambulance-room for carrying out the duties specified in the following sub-paragraph (2).

Provided that, in the cases factories employing less than 500 workers per day, the Chief Inspector of Factories may allow attendance for shorter duration after taking into consideration all the relevant facts of each case.

2)In addition to the duties specified in sub-paragraph(1) the medical practitioner so appointed shall perform the following duties, that is to say:-

a)to maintain Health Register in

Form 29.

b)to undertake medical supervision of persons engaged in dangerous operations specified in rule 165 of these rules.

c)to look after health, education ad-rehabilitation of sick, injured or affected workers.

d)to carry out inspection of work-rooms where dangerous operations are carried out and to advice the management of the measures to be adopted for protection of health of the workers involved therein.

14.Exemption:- If in respect of any factory, the Chief Inspector is satisfied that owing to exceptional circumstances or infrequency of the process or for any other reason all or any of the provisions of this schedule are not necessary for the protection of employees, the State Government or subject to control of State Government the Chief Inspector may by a certificate in writing exempt such factory, from all or any of the provisions on such conditions as he may specify therein. Such certificate may at any time be revoked by Chief Inspector after recording his reason therefore.

APPENDIX A
(Clause 3(b))

1.Production of benzene.

2.Process where benzene is used for chemical synthesis.

3.Motor spirits (used as fuel).

APPENDIX
B (Clause 11)

a)The hazards. :-

i)Benzene and substances containing benzene are harmful.

ii)Prolonged or repeated breathing of benzene vapours may result in act of chronic poisoning.

iii)Benzene can also be absorbed through skin which may cause skin and other diseases.

b)The preventive measures to be taken:-

i)Avoid breathing of benzene vapours.

ii)Avoid prolonged or repeated contact of benzene with the skin.

iii)Remove benzene soaked or wet clothing promptly.

iv) If any time you are exposed to high concentration of benzene vapours and exhibit the sign and symptoms such as dizziness, difficulty in breathing, excessive excitation and losing of consciousness, immediately inform your factory Manager.

v)Keep all the containers of benzene closed.

vi)Handle, use and process benzene and substances containing benzene carefully in order to prevent their spillage on floor.

vii)Maintain good house keeping.

c)The protective equipment to be used:-

i)Use respitatory protective equipment in places where benzene vapours are present in high concentration.

ii)In emergency use self-generating oxygen mask or oxygen or air cylinder masks.

iii)Wear hand gloves, aprons, goggles and gum-boots to avoid contact of benzene with your skin and body parts.

d)The first aid measures to be taken in case of acute benzene poisoning:-

i)Remove the clothing immediately if it is wetted with benzene.

ii)If liquid benzene enters eyes, flush thoroughly for at least 15 minutes, with clean running water and immediately secure medical attention.

iii)In case of unusual exposure to benzene vapour call a physician immediately. Until he arrives, do the following:-

If the exposed person is conscious:-

a)Move him to fresh air in open.

b)Lay down without a pillow and keep him quiet and warm. If the exposed person in unconscious:-

a)Lay him down preferably on the left side with the head low.

b)Remove any false teeth, chewing gum, tobacco or other foreign objects which may be in his mouth.

c)Provide him artificial respiration in case difficulty is being experienced in breathing.

d)In case of shallow breathing or cyanosis (blueness skin, lips, ear, finger, nail, beds) he should be provided with medical oxygen or oxygen carbon dioxide mixture. If needed he should be given artificial respiration.

Oxygen should be administered by trained person only.

Schedule XXI

Process of extracting oils, wax and fats from vegetable and animal sources in Solvent Extraction Plants

1.Application:- This Schedule shall apply to factories in which the process of extraction of oil, wax and fats from oil-cakes, oil-seeds or any other material from vegetable and animal source is carried out in Solvent Extraction Plants.

2.Definition:- In this Schedule, unless the context otherwise requires,-

a)'Competent person' means a person who-

i)is atleast a member or associate member of the Mechanical or Chemical Engineering Branch of the Institute of Engineers(India), or

ii)is a member or associate member of the Indian Institute of Chemical Engineers, or

iii)is a graduate of a recognized University in Chemical Engineering, and

iv)possess a minimum ten years experience of design or construction of flammable process plants specially the Solvent Extraction Plants.

Provided that the State Government or Chief Inspector subject to control of the State Government, may accept any other person as a Competent Person, if it or he is satisfied regarding suitability of qualifications and experience of that person.

b)'plant' means the Solvent Extraction Plants;

c)'Preparatory Process' means the operations involving the equipment used for the preparation of the material for solvent extraction,

d)'Solvent' means an inflammable liquid such as pentane, hexane, heptable, mineral turpentine and the like.

e)'Solvent Extraction Plant' means any plant in which ;the process of extraction of oil, wax or fats from oil-cakes, oil seeds or any other material from vegetable and animal sources, by the use of solvents is carried on and includes the plant for recovery of the solvent.

3.Location and Lay-out:-

1)No plant shall be permitted within a distance of 30 metres from any residential locality or site for public utility.

2)The plant shall not be put into commission unless it is certified by a Competent Person that the plant, machinery and its other equipment are designed, fabricated and erected according to the best known practices pertaining to the process and the said certificate is submitted to the Chief Inspector, atleast one month before the commissioning of the plant.

3)A 1.5 metres high continuous wire fencing shall be provided around the plant, upto a minimum distance of 15 metres from the plants.

4)Boilers Houses and other buildings where open flame processes are carried on shall be located at least 30 metres away from the plant.

5)If godowns and buildings where preparatory processes are carried on are located at a distance of less than 30 metres from the plant, these shall be located at least 15 metres away from the plant, and 1.5 metres high continuous barrier wall of non-combustible materials shall be erected at a distance of not less than 15 metres from the plant
so that it extends to at least 30 metres of vapour travel around its ends from the plant to the possible source of ignition.

Provided that, the existing units may be exempted from any of the provisions of this paragraph on such conditions as the State Government may deem fit.

4.Electrical Installations:-

1)All electrical meters, wirings and other electrical equipments installed or housed in the plant shall be of flame-proof constructions.

2)All metal parts of the plant and building including various tanks and containers where solvents are stored or are present and all parts of electrical equipments not required to be energized shall be properly bonded together and connected to earth so as to avoid accidental rise in the electrical potential of such parts above the earth potential.

5.Prohibition relating to smoking:- Smoking or carrying any source of ignition shall be strictly prohibited within a distance of 30 metres from the plant. For this purpose 'NO SMOKING' signs shall be permanently displayed in the area of the plant.

6.Precautions against friction:-

1)All the hand-tools required to be used in the plant shall be of non-sparking type.

2)No machinery or equipment of the plant shall be belt driven.

Provided that, the plants existing prior to the date of commencement of these rules may continue with belt drives if the belts are of anti-static type and, in the opinion of a Competent Person, a proper earthing arrangement is made.

3)No person shall be allowed to enter and work in the plant if he is wearing clothes made of nylon or such other fibres which can generate static electrical charge, or if he is wearing footwear which is likely to cause sparks by friction.

7.Fire-fighting apparatus:-

1)Adequate number of portable fire extinguishers suitable for use against flammable liquid shall be provided in the plant.

2)Anautomatic water spray sprinkler system on a wet-pipe or open head defuse system with sufficient supply of storage water shall be provided over the plant area throughout the building in which the plant is housed.

3)This requirement shall be in addition to the requirements under any other provisions of the Tripura Factories Rules, 1997 regarding fire fighting apparatus and water supply.

8.Precautions against power failure:- Provisions shall be made any other provisions of steam in the event of power failure and also for emergency over-head water supply for feeding water by gravity to condensors for atleast half an hour which shall come into the play automatically with the power failure.

9.Magnetic Separators:- Oil cake shall be fed to the extractor by conveyor through a hopper, and magnetic separator shall be provided to remove any pieces of iron during its transfer.

10.Venting:-

1)Tanks containing solvents shall be projected with emergency venting to relieve excessive internal pressure in the event of fire.

2)All emergency relief vents shall terminate atleast 6 metres above the ground and be so located that vapours will be directed away from the plant.

11.Waste Water:- process waste water shall be passed through flash evaporator to remove any solvent before it is discharged into a sump which shall be located within the fenced area but shall not be closer than eight metres to such fence.

12.Ventilation:- The shed for the plant shall have adequate natural ventilation and if it is housed in building having ventilation which in the opinion of the Inspector, is inadequate, atleast six air changes per hour shall be ensured by mechanical means.

13.House Keeping: -

1)Solvent shall not be stored in an area covered by the plant except in quantities not exceeding 5 litres, which shall be stored in suitable safety cans.

2)Waste materials such as oily rag, other waste and absorbents used to wipe off solvents, oil and grease in the plant shall be deposited in suitable containers and removed from the premises at least once a day.

3)Premises where the Solvent Extraction process is carried on and the outer area within 15 meters from it shall be kept free from any combustible materials and any spills or oils or solvent shall be cleared up immediately.

14.Examination and repairs:-

1) a) The plant shall be examined by the competent person to determine any weakness or corrosion and wear, once in every twelve months. The Competent Person shall then furnish a report of such examination to the Inspector, with his recommendations as to whether the plant is in safe condition to work and the measures, if any, which in his opinion are necessary to be taken and the time by which such measures shall be taken, so as to ensure that the plant and equipment can be used without any danger to the workers in the factory.

b)If any defects which are causing or likely to cause imminent danger to the life or safety of the workers working on such plant are found by the Competent Person, the Competent Person shall immediately submit a report to that effect to the Inspector and chief Inspector of Factories, standing therein the measures which, in his opinion, are necessary to ensure safety to the workers. When the necessary repairs are carried out, a copy of certificate by Competent Person that the plant has been repaired to his satisfaction shall be forwarded to the Inspector.

2)The plant shall be purged with inert gas or steam before opening for cleaning or repairs and before introducing solvent after repairs.

15.Operating Personnel:-

1)The plant shall be under an overall supervision of a qualified person who shall atleast be a graduate of a statutory University of Chemical Engineering or Technology with specialized knowledge of oils and fats with minimum 5 years experience in Solvent or Flammable.

2)The plant machinery or equipment shall be in the charge of operators who have been trained and made thoroughly conversant to operate the plant so certified by the qualified person referred to Clause(1).

16.Employment of young persons:- No women or young persons shall be employed in the plant.

17.Vapour Detection:- A flame-proof and portable combustible gas indicator or any other type of gas indicator as the Chief Inspector of Factories, may, subject to the control of the State Government, approve as safe and suitable for the purpose, shall be provided and maintained in good working order. A schedule of routine sampling of atmosphere at various location as approved by the Competent Person shall be drawn out and entered in a register maintained for the purpose.

18.Additional provisions for batch-extractors:- The following further provisions shall apply to cater type extractor, namely:-

a)When the Solvent is removed from batch extractors by vacuum, vacuum gauges shall be provided and tests shall be carried out to ensure that minimum vacuum of 650 mm (26”) mercury is obtained and maintained steadily for a minimum period of 30 minutes before the extractor is allowed to be opened for discharge of cake or for persons to enter.

b)When, on opening the doors of a batch extractor, the extracted meal cannot be dislodged from the extractor freely, the doors shall be closed and the material reheated till the meal dislodges freely from the extractor.

c)Where solvent is removed by steam heating, the presence of the Solvent shall be tested at the vent provided on the top of the vessel before opening the vessel.

d)A log-book of operations with the following particulars shall be maintained and made available on demand to the Inspector:-

i)Vacuum gauge reading for each charge.

ii)testing of continuity of electrical bonding and earthing system.

iii)loss of solvent every 24 hours or loss per tonne of raw materials used.

19.Exemption :- If, in respect of any plant, the Chief Inspector is satisfied that owing to exception circumstances or for any other reasons, all or any of the provisions of this Schedule are not necessary for the protection of the persons employed in the plant, he may by a certificate in writing exempt such factories from all or any of the provisions on such conditions as he may specify therein. Such certificates may at any time be revoked by the Chief Inspector without assigning any reasons.

Schedule XXII

Manufacture or Manipulation of Carcinogenic Dye Intermediates.

1.Application:- This Schedule shall apply in respect of all factories or any part thereof where processes in which the prohibited substances and controlled substances mentioned in paragraphs 3 and 4 respectively, are used, handled, manufactured, formed or dried, and the processes incidental thereto in the course of which these substances are formed, are carried on. The processes indicated in this paragraph shall hereinafter be referred to as "the said processes" and such a reference shall mean any or all the processes described in this paragraph.

2.Definitions:- For the purpose of this Schedule unless the context otherwise requires:-

a)"Controlled Substances" means chemical substances mentioned in paragraph 4 of this Schedule.

b)"Efficient Exhaust Draught" means localized ventilation effected by mechanical means for the removal of gas, vapour, dust or fume so as to prevent them from escaping into the air of any place in which fails to remove smoke generated at the point where such gas, vapour, fume or dust originate.

c)"First Employment" means first employment in the said processes and also reemployment in such processes following any cessation of employment for a continuous period exceeding three calendar months;

d)"Prohibited Substances" means chemical substances mentioned in paragraph 3 of the Schedule.

3.Prohibited substances:- For the purpose of this Schedule, the following chemical substances shall be classified as "Prohibited substances" except when these substances are present or are formed as a by-product of a chemical reaction in a total concentration not exceeding one per cent;

a)Beta-naphthylamina and its salts.

b)Benzidine and its salts.

c)4-amino diphenyl and its salts,

d)4-nitro diphenyl and its salts, and

e)any substance containing any of these compounds.

4.Controlled Substances:- For the purpose of this Schedule, the following chemical substances shall be classified as controlled substances namely :-

a)Alpha naphthylamine or alphanaphthylamine containing not more than one percent of betanaphthylamine either as by-product of chemical reaction or otherwise, and its salts.

b)Ortho-tolidine and its salts.

c)Dianisidine and its salts.

d)Dichlorobenzidine and its salts.

e)Auramine.

f)Magneta.

5.Prohibition of employment:- No person shall be employed in the said process in any factory in which any prohibited substance is formed, manufactured, processes, handled or used except as exempted by the Chief Inspector as stipulated in paragraph 26.

6.Requirements for processing or handling controlled substances:-

1)Wherever any of the controlled substances referred to in paragraph 4 are formed, manufactured, processed, handled, or used, all practical steps shall

be taken to prevent inhalation, ingestion or absorption of the said controlled substance, by the workers while engaged in processing that substance and its storage or transport within the plant, or in cleaning or maintenance of the concerned equipment, plant, machinery and storage areas.

2)As far as possible all operations shall be carried out in a totally enclosed system. Wherever such enclosure is not possible, efficient exhaust draught shall be applied at the point where the controlled substances are likely to escape into the atmosphere during the process.

3)The controlled substances shall be received in the factory in tightly closed containers and shall be kept so except when those substances are in process or in use. The controlled substances shall leave the factory only in tightly closed containers of appropriate type. All the containers shall be plainly labeled to indicate the contents.

7.Efficient exhaust draught:- Unless the manufacturing process is completely enclosed so as not to give off dust or fume it shall be carried on without the use of an efficient exhaust draught when any controlled substance, :-

a)is introduced into a tank hopper machine or container or filled into cartridge; or

b)is ground, crushed, mixed, sieved or blended.

8.Personal protective equipment:-

1)The following items of personal protective equipment shall be provided and issued to every worker employed in the said processes:-

a)long trousers and shirts or overalls with full sleeves and head coverings. The shirt or overall shall cover the neck completely.

b)Rubber-gum-boots.

2)The following items of personal protective equipment, shall be provided in sufficient numbers for use by workers employed in the said processes when there is danger of injury during the performance of normal duties or in the event of emergency;

a)Rubber hand-gloves.

b)Rubber aprons.

c)Airlines respirators or other suitable respiratory protective equipment.

3)It shall be the responsibility of the manager to maintain all items of personal protective equipment in a clean and hygienic condition and in good state of repair.

9.Prohibition relating to employment of women and young persons:-

No women or young persons shall be employed or permitted to work in any room in which the said processes are carried on.

10.Floors of work room.:- The floor of every work room in which the said processes are carried on shall be:-

a)smooth and impervious to water without using asphalt or tar in the composition of the floor.

b)maintained in a good state of repair.

c)with a suitable slope for easy draining and provided with gutters, and

d)thoroughly washed daily with the drain water being led into a sewer through a closed channel.

11.Disposal of empty container:-

1)Empty containers used for holding or staring controlled substances

shall be thoroughly cleaned of their contents and treated with an inactivating agent before being discarded.

2)Empty non-metallic containers used for holding controlled substances shall be burnt.

12.Manual handling:- controlled substances shall not be allowed to be mixed, filled, emptied or handled except by means of a scoop with a handle. Such scoop shall be thoroughly cleaned daily.

13.Instructions regarding risk.:- Every worker on his first employment in the said processes shall be fully instructed on the properties of the toxic chemicals to which he is likely to be exposed and of the dangers involved and the precautions to be taken. Workers shall also be instructed on the measures to be taken to deal with an emergency.

14.Cautionary placards:- Cautionary placards in the form specified in the Appendix to this Schedule and printed in the language of the majority of the workers employed in the said processes shall be affixed in prominent places frequented by them in the factory, where the placards can be easily and conveniently read.

Arrangements shall be made by the manager to instruct periodically all such workers regarding the precautions contained in the cautionary placards.

15.Medical Examinations:-

1)Every worker employed in the said processes shall be examined by a Medical Inspector of Factories or a Certifying Surgeon within 14 days of his first employment. Such examination shall include tests which the Medical Inspector of Factories or Certifying Surgeon may consider appropriate and shall include exfoliative cytology of the urine. No worker shall be allowed to work after 14 days of his first employment in the factory unless certified fit for such employment by the Medical Inspector of Factories or Certifying Surgeon.

2)Every worker employed in the said processes shall be reexamined by a Medical Inspector or Certifying Surgeon at least once in every six calendar months. Such examination shall include tests which the Medical Inspector or Certifying Surgeon may consider appropriate but shall include exfoliative cytology of the urine.

3)A person medically examined under sub-paragraph (1) shall be granted by the Medical Inspector or Certifying Surgeon a certificate of fitness in

Form 28. Recordof each re-examination carried out under sub-paragraph (2)shall be entered in the certificate. The certificates shall be kept in the custody of the manager of the factory.

4)The record of each examination carried out as referred to in sub-paragraph (1)and (2) including the nature and the results of the tests shall be entered by the Medical Inspector or Certifying Surgeon in the health register in

Form 29.

5)The certificates of fitness and the health register shall be kept readily available for inspection by an Inspector.

6)If at any time the Medical Inspector or Certifying Surgeon is of the opinion that a person is no longer fit for employment in the said processes or in any other work on the ground that continuance therein would involve damage to his health, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in these documents shall also include the period for which he considers that the said person is unfit for work in the said processes or in any other work, as the case may be.

7)No person who has been found unfit to work as said in sub-paragraph(6) shall be re-employed or permitted to work unless the Medical Inspector of Factories or Certifying Surgeon after further examination, again certifies him to be fit for employment.

8)No worker shall be required to pay the charges or fees for the medical examination, re-examination or tests required to be done under this paragraph. Such charges or fees shall be paid by the occupier of the factory.

16.Medical facilities:-

1)The occupier of the factory shall appoint a qualified medical practitioner whose appointment shall be subject to confirmation by the Chief Inspector. The qualified medical practitioner so appointed shall be known as the appointed doctor.

2)The occupier shall provide:-

a)for the purpose of medical examination which the appointed doctor wishes to conduct at the factory premises for his exclusive use, a room which shall be properly cleaned, adequately ventilated, lighted and furnished with a screen, a table (with writing material), chairs and facilities and instruments for such examination, and

b)Oxygen gas cylinder with qualified personnel for its administration.

3)A record of medical examination and appropriate tests carried out by appointed doctor shall be maintained in a form approved by the Chief Inspector.

4)No person shall be employed in the said process unless he has been examined by using appropriate tests and found fit for the said process by the appointed doctor.

5)Persons examined in compliance with sub-paragraph(4) shall be re-examined by the appointed doctor at intervals of not more than 3 months or at such other intervals as may be directed in writing by the Chief Inspector and records of such examination shall be entered in the register provided under sub-paragraph(3).

6)If at any time, the appointed doctor is of opinion that any person is no longer fit for employment in the said process on the ground that continuance thereat would involve special danger to health, he shall make a record of his findings in the said register and intimate the manager in writing that the said person is unfit to work in the said process.

7)A person so found unfit by the appointed doctor shall be sent by the manager to the Medical Inspector of Factories or the Certifying surgeon with a report from the appointed doctor. The Medical Inspector of Factories or Certifying Surgeon after examination may suspend the said person from work in the said process.

8)No workers shall be required to pay the charges or fees for the medical examination, re-examination or tests required to be done under this paragraph. Such charges or fees shall be paid by the occupier of the factory.

17.Obligations of the workers:- It shall be the duty of the persons employed in the said processes to submit themselves for the medical examination including expoliative cytology of urine by the Medical Inspector of Factories or Certifying Surgeon or the appointed doctor as provided for under these rules.

18.Washing and bathing facilities:- i) The following washing and bathing shall be provided and maintained in a clean state and in good repair for the use of all workers employed in the said processes, namely:-

a)A wash place under cover having constant supply of water and provided with clean towels, soap and nail brush and with at least one stand pipe for every five such workers.

b)50 per cent of the stand pipes provided under clause(a) shall be located in bathrooms where both hot and cold water shall be made available during the working hours of the factory and for one hour thereafter.

c)The washing and bathing facilities shall be in close proximity of the area housing the said processes but the same shall not be at a distance longer than 15 meters. Before the end of each shift one hour shall be allowed for bathing for each worker who is employed in the said processes and at least 10 minutes shall be allowed for washing before each meal in addition to the regular time allowed for meals.

d)Clean towels shall be provided individually to each worker.

e)In addition to the taps mentioned under clause(a), one stand pipe, in which warm water is made available, shall be provided on each floor.

2)Arrangement shall be made to wash factory uniforms and other work clothes every day.

19.Food, drinks, etc. prohibited in work-room:- No worker shall consume food, drink, pan, supari or tobacco or shall smoke on any premises in which the said processes are carried on and no worker shall remain in any such room during intervals of meals or rest.

20.Cloak room:- There shall be provided and maintained in a clean state and in good repair for the use of the workers employed in the said processes:-

a)a cloak room with lockers having two compartments - one for street clothes and the other for work clothes, and

b)a place separate from the locker room and the mess room for the storage of protective equipments provided under paragraph 7. The accommodation so provided shall be under the care of a responsible person and shall be kept clean.

21.Mess room:- There shall be provided and maintained for the use of workers employed in the said processes who remain on the premises during the meal intervals, a mess room which shall be furnished with tables and benches and provided with suitable means for warming food. Mess shall be placed under the charge of a responsible person and shall be kept clean.

22.Drying oven or stoves:

1)Every drying stove shall be efficiently ventilated to the out side air in such manner that hot air from the stove shall not be drawn into any work-room.

2)No person shall enter stove to remove the contents until a free current of air has been passed through it by mechanical means.

23.Restriction on age of persons employed:- No worker under the age of 40 years shall be engaged in the factory in the said processes for the first time after the date on which the Schedule comes into force.

24.Separation of processes: - The said process shall be carried on in a room or room which shall not directly communicate with any other room or rooms not having the said process except through a passage open entirely to outside atmosphere.

25.Testing of atmosphere etc.:- The prohibited substances in the atmosphere of the work-room where the manufacturing process is carried on shall be estimated once in every week and records of results of such estimation shall be made available when required by the Inspector.

26.Exemptions: -

1)The Chief Inspector may by a certificate in writing (which he may at his discretion revoke at any time) and subject to such conditions, if any, at may be specified therein, exempt any process in the course of which any of the prohibited substances is formed processed, manufactured, handled or used, from the provisions of paragraph 5 if he is satisfied that the process is carried out in a totally enclosed and hermetically sealed system in such a manner that the prohibited substance is not removed from the system except in quantities no greater then that required for the purposes of control of the process or such purposes as is necessary to ensure that the product is free from any of the prohibited substances.

2)The Chief Inspector may allow the manufacture, handling or use of benzidine hydrochloride, if he is satisfied that all the processes in connection with it are carried out in a totally enclosed system in such a manner that no prohibited substance other than benzidine hydrochloride is removed there from except in quantities no greater than that required for the purposes of control of the processes or such purposes as is necessary to ensure that the product is free from prohibited substances and that adequate steps are taken to ensure that benzidine hydrochloride is, except while not in a totally enclosed system, kept wet with not less than one part of water to two parts of benzidine hydrochloride at all times.

27.Exemptions-General:- If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the processes or for any other reason, all or any of the provisions of this Schedule are not necessary for the protection of the workers in the factory, the Chief Inspector may, by a certificate in writing (which he may at his discretion revoke at any time), exempt such factory of all or any of such provisions subject to such conditions, if any, as he may specify therein.

APPENDIX

Cautionary Placard/Notice

1.Dye intermedicates which are nitro or amino derivatives or aromatic hydrocarbons are toxic. You have to handle these chemicals frequently in this factory.

2.Use the various items of protective wear to safeguard your health.

3.Maintain scrupulous cleanliness at all times, thoroughly wash hands and feet before taking meals. It is essential to take a bath before leaving the factory.

4.Wash off any chemical falling on your body with soap and water. If splashed with a solution of the chemical remove the contaminated clothing immediately. These chemicals are absorbed through skin and are known to produce cyanosis. Contact the medical officer or appointed doctor immediately and get his advice.

5.Handle the dye intermediates only with long handled scoops, never with bare hands,

6.Alcoholic drinks should be avoided as they enhance the risk of poisoning by the chemicals.

7.Keep your food and drinks away from the place of work. Consuming food, drinks or tobacco in any from at the place of work is prohibited.

8.Serious effects from work with toxic chemicals may follow after many years. Great care must be taken to maintain absolute cleanliness of body, clothes, machinery and equipment.

Schedule XXIII

Highly Flammable Liquids and Flammable compressed Gases

1.Application:- These rules shall be applicable to all factories where highly flammable liquids or flammable compressed gases are manufacture, stored, handled or used.

2.Definition:- For the purpose of this schedule:-

a)"highly flammable liquid" means any liquid including its solution, emulsion or suspension which when tested in a manner specified by sections 14 and 15 of the petroleum Act, 1934 (30 of 1934) gives off flammable vapours at a temperature less than 32 degree centigrade:

b)"Flammable compressed gas" means flammable compressed gas as defined in section 2 of the Static and Mobile Pressure Vessels (Unfired) Rules, 1981 framed under the Explosive Act 1884.

3.Storage.

1)Every flammable liquid or flammable compressed gas used in every factory shall be stored in suitable fixed storage tank, or in suitable closed vessel located in a safe position under the ground, in the open or in a storeroom of adequate fire resistant construction.

2)Except as necessary for use, operation or maintenance, every vessels or tank which contains or had contained a highly flammable liquids or flammable compressed gas shall be always kept closed and all reasonably practicable steps shall be taken to contain or immediately drain off to suitable container any spill or leak that may occur.

3)Every container vessels, tank, cylinder, or store room used for storing highly flammable liquid or flammable compressed gas shall be clearly and in bold letters marked " Danger- Highly flammable liquid" or "Danger-Flammable Compressed Gas." 4.Enclosed System for conveying Highly Flammable Liquids:- Whenever it is reasonably practicable, highly flammable liquids shall be conveyed within a factory in totally enclosed system consisting of pipe lines, pumps and similar appliances from the storage tank or vessel to the point of use. Such enclosed systems shall be so designed installed, operated and maintained as to avoid leakage or the risk of spilling.

5.Preventing formation of flammable mixture with Air:- Wherever there is possibility for leakage or spill of highly flammable liquid or flammable compressed gas from an equipment, pipe line, valve, joint or other part of a system all practicable measures shall be taken to contain, drain off or dilute such spills or leakage as to prevent formation of flammable mixture with air.

6.Prevention of Ignition:-

1)In every room, work place or other location where highly flammable liquid or flammable combustible gas is stored, conveyed, handled or used or where there is danger of fire or explosion from accumulation of highly flammable liquid or flammable compressed gas in air, all practicable measures shall be taken to exclude the sources of ignition. Such precautions shall include the following:-

a) All electrical apparatus shall either be excluded from the area of risk or they shall be of such construction and so installed and maintained as to prevent the danger of their being a source of ignition;

b) Effective measures shall be adopted for prevention of accumulation of static charges to a dangerous extent;

c) No person shall wear or be allowed to wear any foot wear having iron or steel nails or any other exposed ferrous materials which is likely to cause sparks by friction;

d) Smoking, lighting of matches, lighters or smoking materials shall be

prohibited;

e)transmission belts with iron fasteners shall not be used; and

f)all other precautions, as are reasonably practicable, shall be taken to prevent initiation of ignition from all other possible sources such as open flames, frictional sparks, overheated surfaces of machinery or plant, chemical or physical-chemical reaction and radiant heat.

7.Prohibition of smoking:- No person shall smoke in any place where highly flammable liquid or flammable compressed gas is present in circumstances that smoking would give rise to a risk of fire. The occupier shall take all practicable measures to ensure compliance with this requirement including display of a bold notice indicating prohibition of smoking at every place where this requirement applies.

8.Fire Fighting:- In every factory where highly flammable liquid or flammable compressed gas is manufactures, stored, handled or used, appropriate and adequate means of fighting a fire shall be provided. The adequacy and suitability of such means which expression includes the fixed and portable fire extinguishing systems, extinguishing materials, procedures and the process of fire fighting, shall be to the standards and levels prescribed by the Indian Standards applicable, and in any case not inferior to the stipulations under Rule 82.

9.Exemptions:- If in respect or any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the processes or for any other reasons all or any of the provisions of this schedule is not necessary for protection of the workers in the factory the Chief Inspector may by a certificate in writing, which he may at his discretion revoke at any time exempt such ;factory from all or any of such provisions subject to such conditions, if any , as he may specify therein.

Schedule XXIV

Operations involving High Noise Level

1.Application:- This schedule shall apply to all operations in any manufacturing process having high noise level.

2.Definitions:- For the purpose of this schedule:-

a)“Noise” means any unwanted sound.

b)“High Noise level” means any noise level measured on the A-weighted scale is 90 dB or above.

c)“Decibel” means one-tenth of “Bel” which is the fundamental division of a logarithmic scale used to express the ratio of two specified or implied quantities, the number of “Bels” denoting such a ratio being the logarithmic to the base of 10 of this ratio. The noise level (or the sound pressure level) corresponds to a reference pressure of 2B ×10 neutons per square meter. 00002 or dynes per square centimeter which is the threshold of hearing, that is, the lowest sound pressure level necessary to produce the sensation of hearing in average healthy listeners. The decibel in abbreviated

form is dB.

d)"Frequency" is the rate of pressure variations expressed in cycles per second or hertz.

e)"DBA" refers to sound level in decibels as measured on a sound level meter operating on the A-weighting net work with slow meter response.

f)"A-weighting" means making graded adjustments in the intensities of sound of various frequencies for the purpose of noise measurement, so that the sound pressure level measured by an instrument reflects the actual response of the human ear to the sound measured.

3.Protection against noise:- 1) In every factory, suitable engineering control or administrative measures shall be taken to ensure, so far as is reasonably practicable, that no worker is exposed to sound levels exceeding the maximum permissible noise exposure levels specified in Tables 1 and 2.

TABLE 1

Permissible Exposure in cases of continuous Noise

Total time of exposure (continuous or a number Of short term exposures) per day, in hours	**Sound pressure Level in dBA**
8	90
6	92
4	95
3	97
2	100
1½	102
1	105
¾	107
½	110
¼	115

Notes:- 1) No. exposure in excess of 115 dBA is to be permitted.

2)For any period of exposure falling in between any figure and the next higher or lower figure as indicated in column 1, the permissible sound pressure level is to be determined by extrapolation on a proportionate basis.

TABLE 2

Permissible Exposure levels of Impulsive or Impact Noise.

Peak sound pressure level in Db	**Permitted number of impulses or impact per day.**
140	100
135	315
130	1,000
125	3160
120	10,000

Notes:- 1)No exposure in excess of 140 dB peak sound pressure level is permitted.

2)For any peak sound pressure level falling in between any figure and the next higher or lower figure indicated in column1, the permitted number of impulses or impacts per day is to be determined by extrapolation on a proportionate basis.

3)For any purposes of this schedule, if the variations in the noise level involve makima at intervals of one second or less, the noise is to be considered as

continuous one and the criteria given in Table 1 would apply. In other cases, the noise is to be considered as impulsive or impact noise and the criteria given in Table 2 would apply.

4)When the daily noise exposure is composed of two or more periods of noise exposure at different levels their combined effect should be considered, rather than the individual effect of each. The mixed exposure should be considered to exceed the limit value if the Sum of the

fractions $\frac{C_1}{T_1}=\frac{C_2}{T_2}.....\frac{C_n}{T_n}$ exceeds unity.

Where the C1, C2, etc. indicate the total time of actual exposure at a specified noise level and T1,T2 etc, denote the time of exposure permissible at that level. Noise exposure of less than 90 dBA may be ignored in the above circulation.

5)Where it is not possible to reduce the noise exposure specified in sub-rule (i)by reasonably practicable engineering control or administrative measures, the noise exposure shall be reduced to the greater extent feasible by such control measures, and each worker so exposed shall be provided with suitable protectors so as to reduce the exposure to noise to the levels specified in sub-clause (i).

6)Where the ear protectors provided in accordance with sub-clause (2) and worn by a worker cannot still attenuate the noise reaching near his ear, as determined by subtracting the attenuation value in dBA of the ear protectors, concerned from the measured sound pressure level, to a level permissible under Table 1 or Table 2 as the case may be, the noise exposure period shall be suitable reduced to correspond to the permissible noise exposure specified in sub-clause (1).

7) a) In all cases where the prevailing sound level exceed for permissible levels specified sub-clause (1) there shall be administered an effective hearing conservation programme which shall include among other hearing conservation measures, pre-employment and periodical auditory surveys conducted on workers exposed to noise exceeding the permissible levels, and rehabilitation of such worker

either by reducing the exposure to the noise levels or by transferring then to places where noise levels are relatively less or by any other suitable means.

7) b) Every worker employed in areas where the noise exceeds the maximum permissible exposure levels specified in sub-clause (1) shall be subjected to an auditory examination by a Certifying Surgeon/medical Inspector of Factories within 14 days of his first employment and thereafter, shall be re-examined atleast once in every 12 months. Such initial and periodical examinations shall include tests which the Certifying Surgeon/Medical Inspector of Factories may consider appropriate, and shall include determination of auditory thresholds for pure tons of 125, 250, 500, 1000, 2000, 4000 and 8000 cycles per second.

Schedule XXV
Chemical Works
Part I

1.Application: This schedule shall apply to all manufacture and processes incidental thereto carried on in chemical works.

2.Definition: For the purpose of this schedule-

a)"Chemical Works" means any factory or such parts of any factory as are listed in appendix "A" to this schedule,

b)"Efficient exhaust draught" means localised ventilation effected by mechanical or other means for the removal of gas, vapour, fume or dust to prevent it from escaping into the air of any place in which work is carried on.

c)"Bleaching Powder" means the bleaching powder commonly called chloride of line;

d)"chlorate" means chlorate or per chlorate;

e)"caustic" MEANS HYDROXIDE OF POTASSIUM OR SODIUM; f)"Chrome Process" means the manufacture of chromate or bichromate of potassium or sodium, or the manipulation, movement or other treatment of these substances;

g)"nitro" or amino process" means the manufacture of nitro or amino derivatives of phenol and of benzene or its homologues, and the making of explosives with the use of any of these substances;

h)the term 'permit to work' system means the compliance with the procedures laid down under para 20 of part II.

i)"toxic substances" means all those substances which when they enter into the human body, through inhalation or ingestion or absorption through skin, in sufficient quantities cause fatality or exert serious affliction of health, or chronic harmful effects on the health of persons exposed to it due to its inherent chemical or biological effects. In respect of substances whose TLV is specified in Rule 173, exceeding the concentration specified therein would make the substance toxic;

j)"emergency" means a situation or condition leading to a circumstance or set of circumstances in which there is danger to the life or health of persons or which could result in big fire or explosion or pollution to the work and outside environment, affecting the workers or neighbourhood in a serious manner, demanding immediate action;

k)"dangerous chemical reactions" means high speed reactions, run-away reactions, delayed reactions, etc. and are characterized by evolution of large quantities of heat, intense release of toxic or flammable gases or vapours, sudden pressure build-up etc.,

l) "manipulation" means mixing, blending, filling, emptying, grinding, sieving, drying, packing, sweeping, handling, using, etc.;

m)"approved personal protective equipment" means items of personal protective equipment conforming to the relevant ISI specifications or in the absence of it, personal protective equipment, approved by the Chief Inspector.

n)"appropriate personal protective equipment" means that when the protective equipment is used by the worker, he shall have no risk to his life or health or body; and

o)"confined space" means any space by reason of its construction as well as in relation to the nature of the work carried therein and where hazards to

the persons entering into or working inside exist or are likely to develop during working.

PART II

General Requirements

Applying to all the works in Appendix A

1.Housekeeping:-

1)Any spillage of materials shall be cleaned up before further processing.

2)Floors, platforms, stairways, passages and gangways shall be kept free of any obstructions.

3)There shall be provided easy means of access to all parts of the plant to facilitate cleaning.

2.Improper use of chemicals:- No chemicals or solvents or empty containers containing chemicals or solvents shall be permitted to be used by workers for any purposes other than in the processes for which they are supplied.

3.Prohibition on the use of food, etc.:- No food, drink, tobacco, pan or any edible, item shall be stored or heated or consumed on or near any part of the plant or equipment.

4.Cautionary Notices and Instructions:-

1)Cautionary notices in a language understood by the majority of workers shall be prominently displayed in all hazardous areas drawing the attention of all workers about the hazards to health, hazards involving fire and explosion and any other hazard such as consequences of testing of material or substances used in the process or using any contaminated container for drinking or eating, to which the workers attention should be drawn for ensuring their safety & health.

2)In addition to the above cautionary notice, arrangement shall be made to instruct and educate all the workers including illiterate workers about the hazards in the process including the specific hazards to which they may be exposed to, in the normal course of their work. Such instructions and education should also deal with the hazards involved in unauthorized and unsafe practices including the properties of substances used in the process under normal conditions as well as abnormal conditions and the

precautions to be observed against each and every hazard. Further, an undertaking from the workers shall be obtained within 1 month of their employment and for old workers employed, within one month of coming into operation of the rules, to the effect that they have read the contents of the cautionary notices and instructions, understood them and would abide by them. The training and instructions to all workers and all supervisory personnel shall include the significance of different types of symbols and colours used on the labels stuck or painted on the various types of containers and pipe lines.

5.Evaluation and provision of safeguards before the commencement of process:-

1)Before commencing any process or any experimental work, or any new manufacture covered under Appendix ‘A’ the occupier shall take all possible steps to ascertain definitely all the hazards involved both from the actual operations and the chemical reactions including the dangerous chemical reactions. The properties of the raw materials used, the final products to be made, and any by-products derived during manufacture, shall be carefully studied and provisions shall be made for dealing with

any hazards including effects on workers, which may occur during manufacture.

2)Information in writing giving details of the process, its hazards and the steps taken or proposed to be taken from the design stage to disposal stage for ensuring the safety as in sub-para (1) above should be sent to the Chief Inspector at the earliest but in no case less than 15 days before commencing manufacture, handling, or storage of any of items covered under Appendix 'A' whether on experimental basis, or as pilot plant or as trial production, or as large scale manufacture.

3)The design, construction, installation, operation, maintenance and disposal of the buildings, plant and facilities shall take into consideration effective safeguards against all the safety and health hazards so evaluated.

4)The requirements under the sub-para(1) to (3) shall not act in lieu of or in derogation to, any other provisions contained in any Act governing the work.

6.Authorised entry:- Authorised persons only shall be permitted to enter any section of the factory or plant where any dangerous operations or processes are being carried on or where dangerous chemical reactions are taking place or where hazardous chemicals are stored.

7.Examination of instruments are safety devices:-

1)All instruments and safety devices used in the process shall be tested before taking into use and after carrying out any repair to them and examined once in a month, by a competent person. Records of such tests and examinations shall be maintained in a register.

2)All instruments and safety devices used in the process shall be operated daily or as often as it is necessary to ensure its effective and efficient working at all times.

8.Electrical installations:- All electrical installations used in the process covered in Appendix 'A' shall be of an appropriate type to ensure safety against the hazard prevalent in that area such as suitability against dust, dampness, corrosion, flammability and explosivity etc. and shall conform to the relevant ISI specifications governing their construction and use for that area.

9.Handling and storage of chemicals:-

1)The containers for handling and storage of chemicals shall be of adequate strength taking into consideration the hazardous nature of the contents.

They shall also be provided with adequate labelling and colour coding arrangements to enable identification of the containers and their contents indicating the hazards and safe handling methods and shall conform to the respective ISI standards. The instructions given in the label shall be strictly adhered to. Damaged containers shall be handled only under supervision of a knowledgeable and responsible person and spillage shall be rendered innocuous in a safe manner using appropriate means.

2)The arrangements for the storage of chemicals including charging of chemicals in reaction vessels and containers shall be such as to prevent any risk of fire or explosion or formation of toxic concentration of substances above the limits specified in Rule 173.

3)Without prejudice to the generality of the requirements in sub-para (2) above, the arrangements shall have suitable ventilation facilities and shall enable the maintenance of safe levels in vessels and containers. Such arrangements shall also take into consideration, the type of flooring and the capacity of flooring

and the compatibility requirements of substances with other chemicals stored nearby.

4) a) Storage of chemicals and intermediate products, which are highly unstable or reactive or explosive shall be limited to the quantities required for two months use.

b)Whenever the quantities laid down in the above clause (a) are to be exceeded, the permission of the Chief Inspector shall be obtained.

c)Notwithstanding anything contained in clause (a) and (b) above, the Chief Inspector may direct any factory carrying out processes covered in Appendix 'A' to further limit the storage of hazardous substances to quantities less than two months on considerations of safety.

5)Standby arrangements equal to the biggest container shall always be available to transfer the toxic substances quickly into the standby storage facility if any defect develops in any of the container resulting in the release of toxic substances.

6)Any storage facility constructed using non-metallic material such as Fibreglass Reinforced Plastics (FRP), all glass vessels etc., shall have adequate strength to withstand the stress, if any, exerted by the contents and shall be properly anchored, working platforms, access ladders, pipe lines etc. used in such storage facility shall be independently supported.

10.Facility for isolation:- The plant and equipment shall be so constructed and maintained as to enable quick isolation of plant or part of plant or equipment, with appropriate indication. One copy of the layout plan indicating the isolation facilities shall always be available with the security personnel, the maintenance and the health and safety personnel and these isolation facilities shall be checked for its effectiveness once in a month.

11.Personal protective equipment:-

1)All workers exposed to the hazards in the processes covered by this Schedule shall be provided with appropriate and approved type of personal protective equipment. Such equipment shall be in a clean, sterile and hygienic condition before issue.

2)The occupier shall arrange to inform, educate and supervise all the workers in the use of personal protective equipment while carrying out the job.

3)As regards any doubt regarding the appropriateness of any personal protective equipment, the decision of the Chief Inspector will be final.

12.Alarm Systems:-

1)Suitable and effective alarm systems giving audible and visible indications, shall be installed at the control room as well as in all strategic locations where process control arrangements are available so as to enable corrective action to be taken before the operational parameters exceed the predetermined safe levels or lead to conditions conductive for an outbreak of fire or explosion to occur. Such alarm systems shall be checked daily and tested every month at least once to ensure its performance efficiency at all times.

2)The Chief Inspector may direct such system to be installed in case of plants or processes where toxic materials are being used and spillage or leakage of which may cause wide spread poisoning in or around the plant.

13.Control of escape of substances into the work atmosphere:-

1)Effective arrangements such as, enclosure, or by pass, or efficient exhaust draught, maintenance of negative pressure etc., shall be provided in all

plants, containers, vessels, sewers, drains, flues, ducts, culverts, and buried pipes and equipment, to control the escape and spread of substances which are likely to give rise to fire or explosion or toxic hazards during normal working and in the event of accident or emergency.

2)In the event of the failure of the arrangements for control resulting in the escape of substances in the work atmosphere immediate steps shall be taken to control the process in such a manner, that further escape is brought down to the safe level.

3)The substance that would have escaped into the work atmosphere before taking immediate steps as required in sub-para (2), shall be rendered innocuous by diluting with air or water or any other suitable agent or by suitably treating the substances.

14.Control of dangerous chemical reactions:- Suitable provision, such as automatic and or remote control arrangements, shall be made for controlling the effects of dangerous chemical reactions. In the event of failure of control arrangements automatic flooding or blanketing or other effective arrangements shall come into operation.

15.Testing, examination and repair of plant & equipment :-

1)All parts of plant, equipment and machinery used in the process which in the likely event of their failure may give rise to an emergent situation shall be tested by a competent person before commencing process and retested at an interval or two years or after carrying out repairs to it. The competent person shall identify the parts of the plant, equipment and machinery required to be tested as aforesaid and evolve a suitable testing procedures.

In carrying out the test as mentioned above in respect of pressure vessels or reaction vessels the following precautions shall be observed, namely- a)before the test is carried out, each vessel shall be thoroughly cleaned and examined externally, and as far as practicable, internally also for surface defects, corrosion and foreign matter. Burning the process of cleaning and removal of sludge, if any, all due precautions shall be taken against fire or explosion, if such sludge is of pyropheric nature or contains spontaneously combustible chemicals;

b)as soon as the test is completed, the vessel shall be thoroughly dried internally and shall be clearly stamped with the marks and figures indicating the person by whom testing has been done, and the date of test; and;

c)any vessel which fails to pass the test or which for any other reason is found to be unsafe for use shall be destroyed or rendered unusable under intimation to the Chief Inspector.

2)All parts of plant, equipment, machinery which in the likely event of failure may give rise to an emergent situation shall be examined once in a month by the competent person.

3)Records of testing and examination referred to in paragraphs (1) and (2) shall be maintained as long as that part of the plant, equipment and machinery are in use.

4)All repair work including alteration, modification and addition to be carried out to the plant, equipment and machinery shall be done under the supervision of a responsible person who shall evolve a procedure to ensure safety and health of persons doing the work. When repairs or modification is done on pipelines, and joints are required to be welded, butt welding of joints shall be preferred.

Wherever necessary, the responsible person shall regulate the aforesaid work through a 'permit to work system'.

16.Staging:-

1)All staging that is erected for the purpose of maintenance work or repair work or for work connected with entry into confined spaces and used in the processes included in Appendix 'A' shall be stable, rigid and constructed out of substantial material of adequate strength. Such staging shall conform to the respective Indian Standard specifications.

2)Staging shall not be erected over any closed or open vessel unless the vessel is so constructed and ventilated to prevent exposure of persons working on the stages.

3)All the staging constructed for the purpose of this para shall have appropriate access which are safe and shall be fitted with proper hand rails to a height of one metre and toe board.

17.Seating Arrangements:- The seating arrangements provided for the operating personnel working in processes covered in Appendix 'A' shall be located in a safe manner as to prevent the risk of exposure to toxic, flammable and explosive substances evolved in the work environment in the course of manufacture or repair or maintenance, either due to failure of plant and equipment or due to the substances which are under pressure, escaping into the atmosphere.

18.Entry into or work in confined spaces:-

1)The occupier of every factory to which the provisions of this schedule apply, shall ensure the observance of the following precautions before permitting any person to enter or work inside the confined spaces:-

a)identify all confined spaces and the nature of hazards that are encountered in such spaces, normally or abnormally, and arrange to develop the most appropriate safeguards for ensuring the safety and health of persons entering into or working inside, the confined spaces;

b)regulate the entry or work inside the confined spaces through a 'permit to work system' which should include the safeguards so developed as required under sub-clause (a) above;

c)before testing the confined space for entry into or work, the place shall be rendered safe by washing or cleaning with neutralising agents; or purging with steam or inert gases and making adequate forced ventilation arrangements or such measure which will render the confined space safe;

d)shall arrange to carry out such tests as are necessary for the purpose by a competent person and ensure that the confined space is safe for the persons to enter or work. Such testing shall be carried out as often as is necessary during the course of work to ensure its continued safety;

e)shall arrange to educate and train the personnel who would be required to work in confined spaces about the hazards involved in the work. He shall also keep in readiness the appropriate and approved personal protoctive equipment including arrangements for rescue, resurrection and first aid, and shall arrange supervision of the work at all times by a responsible and knowledgeable person.

2)The manager shall maintain a log of all entry into or work in, confined spaces and such record shall contain the details of persons assigned for the work, the

location of the work and such other details that would have a bearing on the safety and health of the persons assigned for this work. The log book so maintained shall be retained as long as the concerned workers are in service and produced to the Inspector when demanded.

19.Maintenance work etc.:-

1)All the work connected with the maintenance of plants and equipment including cleaning of empty containers which have held hazardous substances used in the processes covered in this schedule, shall be carried out under 'permit to work system' employing trained personnel and under the supervision of responsible person, having knowledge of the hazards and precautions required to deal with them.

2)Maintenance work shall be carried out in such a manner that there is no risk to persons in the vicinity or to persons to pass by. If necessary, the place of such work shall be cordoned off or the presence of unconnected persons effectively controlled.

20.Permit to Work System: The permit to work system shall interalia includes the observance of the following precautions while carring out any specified work to be subjected to the permit to work system.

a) All works subject to the permit to work system shall be carried out under the supervision of a knowledgeable and responsible person,

b) all parts of plant or machinery or equipment on which permit to work system is carried out, shall remain isolated from other parts throughout the period of permit to work and the place of work including the parts of plant, machinery shall be rendered safe by cleaning, purging, washing etc.

c) All work subject to the permit to work system shall have pre-determined work procedures which integrate safety with the work. Such procedures shall be reviewed whenever any change occurs in materials or equipments so that continued safety is ensured.

d) Persons who are assigned to carry out the permit to work system shall be physically fit in all respects taking into consideration the demands and nature, of the work before entering into the confined space. Such person shall be adequately informed about the correct work procedures as well as the precautions to be observed while carrying out the permit to work system,

e) Adequate rescue arrangements wherever considered necessary and adequate first aid, rescue and resurrection arrangements shall be available in good working condition near the place of work while carrying out the permit to work system for use in emergency.

f)Appropriate and approved personal protective equipment shall be used while carrying out the 'permit to work system'.

g)After completion of work subject to the 'permit to work system' the person responsible shall remove all the equipment and tools and restore to the original condition so as to prevent any danger while carrying out regular process.

21.Safety sampling personnel.:- The occupier shall ensure the safety of persons assigned for collecting samples by instructing them on the safe procedures. Such personnel shall be provided with proper and approved personal protective equipment, if required.

22.Ventilation:- Adequate ventilation arrangements shall be provided and maintained at all times in the process area where dangerous or toxic or flammable or explosive substances could be evolved. These arrangements shall ensure that concentrations,

which are either harmful or could result in explosion, are not permitted to be built up in the work environment.

23.Procedures for meeting emergencies:-

1)The occupier of every factory carrying out the works covered in Appendix 'A', shall arrange to identify all types of possible emergencies that could occur in the processes during the course of work or while carrying out maintenance work or repair work. The emergencies so identified shall be reviewed every year.

2)The occupier shall formulated a detailed plan to meet all such identified emergencies including arrangements for summoning outside help for rescue and fire fighting and arrangements for making available urgent medical facilities.

3)The occupier shall send the list of emergencies and the details of procedures and plans formulated to meet the emergencies, to the Chief Inspector.

4)The occupier shall arrange to install distinctive and recognizable warning arrangements to caution all persons inside the plant as well as the neighbouring community, if necessary, to enable evacuation of persons and to enable the observance of emergency procedures by the persons who are assigned emergency duties. All concerned must be well informed about the warning arrangements and their meaning. The arrangements must be checked for its effectiveness every month.

5)Alternate power supply arrangements shall be made and interlocked with the normal power supply system so as to ensure constant supply of power to the facilities and equipment meant for compliance with requirements of paragraphs 10,11,12,13,14,18,22, and this paragraph of part II, part III, part IV and part V of this Schedule.

6)The occupier shall arrange to suspend the further process work in a place where emergency is established and shall forthwith evacuate all persons in that area except workers who have been assigned emergency duties.

7)All the employees of the factory shall be trained about the action to be taken by them including evacuation procedures during emergencies.

8)All emergency procedures must be rehearsed every three months and deficiencies, if any, in the achievement of the objectives shall suitably be corrected.

9)The occupier shall arrange to have ten percent of the workers trained in the use of First Aid Fire Fighting appliances and in the rendering of specific First Aid measures taking into consideration the special hazards of the particular process.

10)The occupier shall furnish immediately on request the specific chemical identity of the hazardous substance to the treating physician when the information is needed to administer proper emergency of first-aid treatment to exposed persons.

24.Danger due to effluents:-

1)Adequate precautions shall be taken to prevent the mixing of effluents from different processes and operations which may cause dangerous or poisonous gases to be evolved.

2)Effluents which contain or give rise in the presence of other effluents to poisonous gases shall be provided with independent drainage systems to ensure that they may be trapped and rendered safe.

Part III
Fire and Explosive Risks

1.Source of ignition including lighting installation:

1)No internal combustion engine and no electric motor or other electric equipment, and fittings and fixures capable of generating sparks or otherwise causing combustion or any other source of ignition or any naked light shall be installed or permitted to be used in the process area where there could be fire and explosion hazards.

2)All hot exhaust pipes shall be installed outside a building and other hot pipes or hot surface or surfaces likely to become hot shall be suitably protected.

3)The classification of work areas in terms of its hazard potential and the selection of electrical equipment or other equipment that could constitute a source of ignition shall be in accordance with the respective Indian Standard.

4)Where a flammable atmosphere may be prevalent or could occur, the soles of footwear worn by workers shall have no metal on them, and the wheels of trucks or conveyors shall be conductive type.

5)All tools and appliances used for work in this area shall be of non-sparking type.

6)Smoking in process areas where there are risks of fire and explosion shall be prohibited, and warning notices in the language understood by majority of workers shall be posted in the factory prohibiting smoking into specified areas.

2.Static Electricity:

1)All machinery and plant, particularly, pipe lines and belt drives, on which static charge is likely to accumulate, shall be effectively earthed.

Receptacles for flammable liquids shall have metallic connections to the earthed supply tanks to prevent static sparking. Where necessary, humidity shall be regulated.

2)Mobile tanker wagons shall be earthed during filling and discharge, and precautions shall be taken to ensure that earthing is effective before such filling or discharge takes place.

3.Lightning Protection: Lightning Protection arrangement shall be fitted where necessary, and shall be maintained.

4.Process heating: The method of providing heat for a process likely to result in fire and explosion shall be as safe as possible and where the use of naked flame is necessary, the plant shall be so constructed as to prevent any escaping flammable gas, vapour, or dust coming into contact with the flame, or exhaust gases, or other sources likely to cause ignition. Wherever possible, the heating arrangement shall be automatically controlled at a pre-determined temperature below the danger temperature.

5.Leakage of flammable Liquids:

1)Provision shall be made to confine by means of bund walls, dykes, sumps etc. possible leakage from storage vessels containing flammable liquids.

2)Waste material in contact with flammable substances shall be disposed off suitably under the supervision of knowledgeable and responsible person.

3)Adequate and suitable fire-fighting appliances shall be installed in the vicinity of such vessels.

6.Safety valves:- Every still and every closed vessel in which gas is evolved or into which gas is passed, and in which the pressure is liable to rise above the atmospheric

pressure, shall have attached to it a pressure gauge, and a proper safety valve or other equally efficient means to relieve the pressure. These appliances shall be maintained in good condition.

7.Installation of pipe line etc.:- All pipelines carrying flammable or explosive substances shall be protected from mechanical damage and shall be examined by a responsible person once in a week to detect any deterioration or defects, or accumulation of flammable or explosive substances, and record kept of any defects found and repairs made.

8.Fire fighting systems:-

1)Every factory employing 500 or more persons and carrying out processes listed in Appendix 'A' shall provide:-

a)Trained and responsible fire fighting squad so as to effectively handle the fire fighting and life saving equipment in the event of fire or other emergency. Number of persons in this squad will necessarily depend upon the size of risk involved, but in no case shall be less than 8 such trained persons to be available at any time. The squad shall consist of watch & ward personnel, fire pump-man and departmental supervisors and operators trained in the operation of fire & emergency services.

b)Squad leaders shall preferably be trained in a recognized government institution and their usefulness enhanced by providing residence on the premises.

c)Squad personnel shall be provided with clothing and equipment including helmets, boots and belts.

2)A muster roll showing the duties allocated to each member of the squad shall be prepared and copies supplied to each leader as well as displayed in prominent places so as to be easily available for reference in case of emergency.

3)The pumpman shall be thoroughly conversant with the location of all appliances. He shall be responsible for maintaining all fire fighting equipment in proper working order. Any defect coming to his notice shall be immediately be brought to the notice of squad leader.

4)As far as is practicable, the fire pump room and the main gate(s) of the factory be connected to all manufacturing or storing areas through telephone interlinked and placed in a convenient location near such areas.

PART IV
Risks of Toxic Substances

1. Leakage:-

1)All plants shall be so designed and constructed as to prevent the escape of toxic substance. Where necessary, separate buildings, rooms, or protective structures shall be used for the dangerous stages of the process and the buildings shall be so designed as to localize any escape of toxic substances.

2)Catch pits, bund walls, dykes, or other suitable safeguards shall be provided to restrict the serious effects of such leakages. Catch pits shall be placed below joints in pipelines where there is danger involved to maintenance and other workers from such leakage.

2.Drainage:- Adequate drainage shall be provided and shall lead to collection tanks specifically provided for this purpose wherein deleterious material shall be

neutralised, treated or otherwise rendered safe before it is discharged into public drains or sewers.

3.Covering of vessels:-

1)Every fixed vessel or structure containing any toxic substance and not so covered as to eliminate all reasonable risk of accidental contact of any portion of the body of a worker, shall be so constructed as to avoid physical contact.

2)Such vessel shall, unless its edge is atleast 90 centimeters above the adjoining ground or platform, be securely fenced to a height of atleast 90 centimeters above such adjoining ground or platform.

3)Where such vessels adjoin and the space between them, clear of any surrounding brick or other work is either less than 45 centimeters in width or is 45 or more centimeters in width, but is not securely fenced in both sides to a height of atleast 90 centimeters, secure barriers shall be so placed as to prevent passage between them;

Provided that sub-paragraph (2) of this paragraph shall not apply to -

a)saturators used in the manufacture of sulphate of ammonia; and

b)that part of the sides of brine evaporating pans which require raking, drawing or filling.

4.Continuous exhaust arrangement:-

1)Any process evolving toxic vapour, gas, fume and substance shall have efficient continuous exhaust draught. Such arrangement shall be interlocked in the process control wherever possible.

2)In the event of failure of continuous exhaust arrangement means shall be provided to automatically stop the process.

5.Work bench:- All the work benches used in processes involving the manipulation of toxic substances, shall be graded properly and shall be made of smooth impervious surface which shall be washed daily after the completion of work.

6.Waste disposal:-

1)There shall be provided a suitable receptacle made of non-absorbable material with tightly fitting cover for depositing waste material soiled with toxic substances and the contents of such receptacle shall be destroyed by burning or using other suitable methods under the supervision of a responsible person.

2)During the course of manufacture, whenever any batch or intermediate products having toxicity is rejected on considerations of quality, sufficient precautions shall be taken to render them innocuous or otherwise treat them or inactive them, before disposal.

3)The empty containers of toxic substances shall be cleaned thoroughly before disposal under the supervision of a responsible person.

PART V

Special provisions

1)Special precautions for Nitro or Amino Processes:-

1)Unless the crystallised nitro or amino substances or any of its liquor is broken or agitated in a completely enclosed process so as not to give rise to dust or fume, such process shall be carried on under an efficient exhaust draught or by adopting any other suitable means in such a manner as to prevent the escape of dust or fume in the working atmosphere.

2)No part of the plant or equipment or implements which was in contact with nitro or amino compounds shall be repaired, or handled unless they have been emptied and thoroughly cleaned and decontaminated.

3)Filling of containers with nitro or amino compounds shall be done only by using a suitable scoop to avoid physical contact and the drying of the containers in the stove shall be done in such a manner that the hot and contaminated air from the stove is not drawn into the work room.

4)Processes involving the steaming into or around any vessel containing nitro or amino compounds or its raw materials shall be carried out in such a manner that the steam or vapour is effectively prevented to be blown back into the working atmosphere.

5)Suitable antidotes such as methylene blue injections shall always be available at designated places of work for the use during emergency involving the poisoning with nitro or amino compounds.

2.Special precautions for 'chrome processes':-

1)Grinding and sieving of raw materials in chrome processes shall be carried on in such a manner and under such condition as to secure effective separation from any other processes and under an efficient exhaust draught.

2)There shall be washing facilities located very near to places where wet chrome processes such as leaching, acidification, sulphate settling, evaporation, crystallisation, centrifugation or packing are carried out, to enable quick washing of affected parts of body with running water.

3)Weekly inspection of hand and feet of all persons employed in chrome process shall be done by a qualified nurse and record of such inspections shall be maintained in a form approved by the Chief Inspector.

4)There shall be always available at designated places of work suitable ointment such as glycerine, vaseline, etc. and water proof plaster in a separate box readily accessible to the workers so as to protect against perforation of nasal septum.

3)Special precautions for processes carried out in all glass vessels:- 1) Processes and Chemical reactions such as manufacture of vinyl chloride, benzyl chloride etc. which are required to be carried out in all glasses vessels shall have suitable means like substantial wire mesh covering to protect persons working nearby in the event of breakage of glass vessel. 2)Any spillage or emission of vapour from the all glass vessel due to breakage, shall be immediately inactivated or rendered innocuous by suitable means such as dilution with water or suitable solvents so as to avoid the risks of fire or explosion or health hazards.

4.Special precautions for processes involving chlorate manufacture:-

1)Crystallisation, grinding or packing of chlorate shall not be done in a place used for any other purpose and such places shall have hard, smooth and impervious surface made of non-combustible material. The place shall be thoroughly cleaned daily.

2)The personal protective equipment like overall, etc. provided for the chlorate workers shall not be taken from the place of work and they shall be thoroughly cleaned daily.

3)Adequate quantity of water shall be available near the place of chlorate process for use during fire emergency.

4)Wooden vessels shall not be used for the crystallization or chlorate or to contain crystallised ground chlorate.

1)Special precautions in the use of plant and equipments made from reinforced plastics:-

a)All plant and equipments shall conform to appropriate Indian or any other National Standard.

b)Care shall be taken during storage, transport, handling and installation of plant and equipments to avoid accidental damage.

c)All plant and equipments shall be installed in such a way as to ensure that loads are dis_____ or as per the recommendations of the manufacturers.

d)All pipe work shall be supported so that total loads local to the branches on the vessel or tank do not exceed their design values.

e)After erection all plant and equipments shall be subjected to a pressure test followed by a thorough examination by a competent person. The test and examination shall be as per relevant standard. A certificate of test and examination by competent person shall be obtained and kept available at site.

f)All plant and equipments shall be subjected to periodical test and examination and record maintained as per paragraph 15 in Part II of this Schedule.

g)Plant and equipments during their use shall not be subjected to over filling or over loading beyond rated capacity.

PART VI
Medical Requirements

1.Decontamination facilities:- In all places where toxic substances are used in processes listed in Appendix 'A' the following provisions shall be made to meet an emergency:-

a)fully equipped first aid box.

b)readily accessible means of drenching with water persons, parts of body of persons, and clothing of persons who have been contaminated with such toxic and corrosive substances, and such means shall be as shown in the Table below:-

No of persons employed at any any time	**No of drenching showers**
Upto 50 persons	2
51 to 100	
	3 101 to 200 3 + 1 for every 50 persons
thereafter 201 to 400	5+ 1 for every 100 persons thereafter
401 and above	7+ 1 for every 200 persons thereafter

c) a sufficient number of eye wash bottles filled with distilled water or suitable liquid, kept in boxes or cupboards conveniently situated and clearly indicated by a distinctive sign which shall be visible at all times.

2. Occupational health centre: In all the factories carrying out processes covered in Appendix "A" there shall be provided and maintained in good order an occupational health centre with facilities as per scale laid down hereunder:

1)For factories employing upto 50 workers:

a)the services of a qualified medical practitioner hereinafter known as

Factory Medical Officer, available on a retainership basis, in his notified clinic near to the factory for seeking medical help during emergency. He will also carry out the pre-employment and periodical medical examinations as stipulated in paragraph 4 of this part.

b) a minimum of five persons trained in first aid procedures, amongst whom at least one shall always be available during the working period.

c)a fully equipped first aid box.

2)For factories employing 51 to 200 workers:

a)The occupational health centre shall have a room having a minimum floor area of 15 sq.m., with floors and walls made of smooth, hard and impervious surface and shall be adequately illuminated, ventilated and equipped.

b) A part-time factory Medical Officer will be in over all charge of the Centre who shall visit the factory minimum twice in a week and whose services shall be readily available during emergency.

c) There shall be one qualified and trained dresser cum compounder on duty throughout the working period.

d)A fully equipped first aid box.

3)For factories employing above 200 workers;

i)There shall be one full-time Factory Medical Officer for factories employing upto 500 workers and one more medical Officer for every additional 1000 workers or part thereof;

ii)an Occupational Health Centre having at least 2 rooms each with a minimum floor area or 15 sq. metre with floors and walls made of smooth and impervious surface and adequate illumination and ventilation as well as equipment as per the schedule annexed to the Rule.

iii)there shall be one nurse, one dresser-cum-compounder and one sweeper-cum-ward boy through-out the working period.

iv)the Occupational Health Centre shall be suitably equipped to manage medical emergencies.

3.Ambulance Van:

1)In every factory carrying out processes covered in Appendix ‘A’, there shall be provided and maintained in good condition, a suitably constructed and fully equipped ambulance van as per Appendix ‘C’ manned by a full-time driver-cum-mechanic and a helper, trained in first aid for the purposes of transportation of serious cases of accidents or sickness unless arrangements for procuring such facility at short notice during emergencies have been made with the nearby hospital or other places. The ambulance van shall not be used for any purpose other than the purpose stipulated herein and will always be available near the occupational Health Centre.

2)The relaxation to procure Ambulance Van from nearby places provided for in sub-para (1) above will not be applicable to factories employing more than 500 workers.

4.Medical Examination:

1) Workers employed in process covered in Appendix “A” shall be medically examined by a qualified medical practitioner in the following manner:-

a) Once before employment, to ascertain physical fitness of the person to the particular job;

b) Once in a period of 6 months, to ascertain the health status of all the

workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Factory Medical Officer it is necessary to do so at a shorter interval in respect of any workers.

c) The details of per-employment and periodical medical examinations carried out as aforesaid shall be recorded in the Health Register in

Form 29.

2)No person shall be employed for the first time without a certificate of fitness in

Form 28 granted by the Factory Medical Officer. If the Factory Medical Officer declares a person unfit for being employed in any process covered in Appendix "A", such a person shall have the right to appeal to the Inspector who shall refer the matter to the Certifying surgeon whose opinion shall be final in this regard. If the Inspector is also a Certifying Surgeon, he may dispose of the application himself.

3)Any findings of the Factory Medical Officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Certifying Surgeon who shall inturn, examine the concerned worker and communicate his findings to the occupier within 30 days. If the Certifying Surgeon is of the opinion that the worker so examined is required to be taken away from the process for health protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Certifying Surgeon, fully incapacitated in which case the worker affected shall be suitably rehabilitated.

4)A certifying Surgeon on his own motion or on a reference from an Inspector may conduct medical examination of a worker to ascertain the suitability of his employment in a hazardous process or for ascertaining his health status. The opinion of the Certifying Surgeon in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

5)The worker taken away from employment in any process covered in Appendix "A" may be employed again in the same process only after obtaining the Fitness Certificate from the Certifying Surgeon and after making entries to that effect in the Health Register.

6)The worker required to undergo medical examination under these rules and for any medical survey conducted by or on behalf of the Central or the State Government shall not refuse to undergo such medical examination.

PART VII
Additional Welfare Amenities

1.Washing facilities:

1)There shall be provided and maintained in every factory for the use of all the workers taps for washing, at the rate of one tap for every 115 persons including liquid soap in a container with tilting arrangements and nail brushes or other suitable means for effective cleaning. Such facilities shall be conveniently accessible and shall be kept in a clean and hygienic condition.

2)If washing facilities as required above are provided for women, such facilities shall be separate for them and adequate privacy at all times shall be ensured in such facilities.

2Mess Room facilities:

1)The occupier of all the factories carrying out processes covered in Appendix "A" and employing 50 workers or more, shall provide for all the workers working in a shift mess room facilities which are well ventilated and provided with tables and sitting facilities alongwith the provisions of cold and hygienic drinking water facilities.

2)Such facilities shall include suitable arrangements for cleaning and washing and shall be maintained in a clean and hygienic conditions.

3.Cloakroom facilities:-

1)The occupier of every factory carrying out any process covered in Appendix 'A' shall provide for all the workers employed in the process cloak room facilities with lockers. Each workers shall be provided with two lockers, one for work clothing and another separately for personal clothing and the lockers should be such as to enable the keeping of the clothing in a hanging position.

2)The cloak room facilities so provided in pursuance of sub-para (1) shall be located as far as possible near to the facilities provided for washing in pursuance of para1(1). If it is not possible to locate the washing facilities the cloak room facilities shall have adequate and suitable arrangements for cleaning & washing.

4.Special Bathing Facilities:

1)The occupier of any factory carrying out the process covered under Appendix "B" shall provide special bathing facilities for all the workers employed and such facilities shall be provided at the rate of 1 for 25 workers and part thereof, and shall be maintained in a clean and hygienic condition.

2)The occupier shall insist all the workers employed in the processes covered in Appendix 'B' to take bath after the completion of the day's or shift work using the bathing facilities so provided and shall also effectively prevent such of these workers taking bath in any place other than the bathing facilities.

3)Notwithstanding anything contained in sub-para (1) above, the Chief Inspector may require in writing the occupier of any factory carrying out any other process for which in his opinion bathing facilities are essential from the health point of view, to provide special bathing facilities.

PART VIII

1.Duties of workers

1)Every worker employed in processes covered in Appendix 'A' and Appendix 'B' shall not make any safety device or appliance or any guarding or fencing arrangement, inoperative or defective and shall report the defective condition of the aforesaid arrangements as soon as he is aware of any such defect.

2)Before commencing any work, all workers employed in processes covered in Appendix 'A' shall check their workplace as well as the machinery, equipment or appliance used in the processes and report any mal-function or defect immediately to the supervisor of any responsible person of the management.

3)All workers shall co-operate in all respects with the management while carrying out any work or any emergency duty assigned to them in pursuance of this

schedule and shall always use all the personal protective equipments issued to them in a careful manner.

4)All workers employed in the processes covered in Appendix 'A' or Appendix 'B' shall not smoke in the process area or storage area. If special facilities are provided by the management only such facilities should be used.

5)All workers employed in the processes covered in Appendix 'A' shall not remain in unauthorised place or carry out unauthorised work or improvise any arrangements or adopt short cut method of misuse any of the facilities provided in pursuance of the Schedule, in such a manner as to cause risk to themselves as well as or to others employed.

6)The workers shall not refuse undergoing medical examination as required under these rules.

PART IX

Restrictions on the employment of young persons under 18 years of age and women.

1.The Chief Inspector may by an order in writing, restrict or prohibit the employment of women and young persons under the age of 18, in any of the processes covered in Appendix 'A' of this schedule on considerations of health and safety of women and young persons.

2.Such persons who are restricted or prohibited from working in the process due to the order issued in pursuance of sub-para (1) above shall be provided with alternate work which is not detrimental to their health or safety.

PART X

Exemptions

1. Power of exemption:- The State Government or subject to the control of the State government, the Chief Inspector may exempt from the compliance with any of the requirements of this Schedule partly or fully, any factory carrying out processes covered in Appendix 'A', if it is clearly and satisfactorily established by the occupier that the compliance with any of the requirement is not necessary to ensure the safety and health of persons employed suitable and effective alternate arrangements are available to any of the requirements covered in this schedule.

Appendix 'A'

Any work or that part of works in which-

a)the manufacture, manipulation or recovery of any of the following is carried on:-

i)sodium, potassium, iron, aluminium, cobalt, nickel, copper, arsenic, antimony, chromium, zinc, selenium, magnesium, cadmium, mercury, beryllium, and their organic and inorganic salts, alloys, oxidies and hydroxides;

ii)Ammonia, ammonium hydroxide and salts of ammonium;

iii)the organic or inorganic compounds of sulphurous, sulphuric, nitric, nitrous, hydrochloric, hydrofluoric, hydriodic, hydrosulphuric, hydrobromic, boric;

iv)cyanogen compounds, cyanide compounds, cyanate compounds;

v)phosphorous and its compounds other than organo phosphorous insecticides;

vi)chlorine.

b)hydrogen sulphide is evolved by the decomposition of metallic sulphides, or hydrogen sulphide is used in the production of such sulphides;

c)bleaching powder is manufactured or chlorine gas is produced in chlor-alkali plants;

d) i) gas tar or coal tar or bitumen or shale oil esphalt or any residue of such tar is distilled or is used in any process of chemicals manufacture;

ii)tar based synthetic colouring matters or their intermediates are produced;

e)nitric acid is used in the manufacture of nitro compounds;

f)explosives are produced with the use of nitro compounds ;

g)aliphatic or aromatic compounds or their metallic and non metallic derivaties or substituted derivatives, such as chloroform, ethylene glycol, formaldehyde, benzyls chloride, phenol, methyl ethyl keytone peroxide, cobalt carbonyl, tungsten carbide etc, are manufactured or recovered.

Appendix 'B'

Concerning Special Bathing Accommodation in pursuance of para 4 of part IV.

3.Nitro or amino processes.

4.All chrome processes.

5.Processes of distilling gas or coal tar or processes of chemical manufacture in which tar is used.

6.Processes involving manufacture, manipulation, handling or recovery of cyanogen compound, cyanide compound, cyanate compounds.

7.Processes involving manufacture of bleaching powder or production of chlorine gas in chlor-alkali plants.

8.Manufacture, manipulation or recovery of nickel and its compounds.

9.All processes involving the manufacture, manipulation or recovery of aliphatic or aromatic compounds or their derivatives or substituted derivatives.

Appendix 'C'

Ambulance

Ambulance should have the following equipments:-

General

-An wheeled stretcher with folding and adjusting devices; -Head of the stretcher must be capable of being tilted upward, -Fixed suction unit with equipments;
-Fixed oxygen supply with equipments;
-Pillow with case;
-Sheets;
-Blankets;
-Towels;
-Emesis bag;
-Bed pan;
-Urinal;
-Glass.

Safety equipment

-Flares with life or 30 minutes;
-Flood lights;
-Flash lights;
-Fire extinguisher dry powder type;
- Insulated gauntlets.

Emergency care equipments

Resuscitation

-Portable suction
-Portable oxygen unit;

-Bag-valve-mask, hand operated artificial ventilation unit; -Airways;

-Mouth bags;

-Tracheotomy adaptors;

-Short spine board;

-I.V. Fluids with administration unit;

-B.P. manometer;

-Chug;

-Stethoscope.

-Immobilization;-

-Long & short spine boards.

Dressings

-Cauze pads - 4” ×4”;

-Universal dressing 10” ×36”;

-Roll of aluminium foils;

-Soft roller bandages 6” ×5” yards;

-Adhesive tape in 3” roll;

-Safety pins;

-Bandage sheets;

-Burn sheet.

Poisoning

-Syrup of Ipecac;

-Activated charcoal;

-Snake bite kit; pre-packeted in doses.

-Drinking water.

Emergency Medicines

- As per requirement (under the advice of Medical Officer only)

Schedule XXVI

Manipulation of stone or any other material containing free silica.

1.Application:- This Schedule shall apply to all factories or parts of factories in which manipulation of stone or any other material containing free silica is carried on.

2.Definitions:- For the purpose of this schedule:-

a)"manipulation" means crushing, breaking, chipping, dressing, grinding, sieving, mixing, grading or handling of stone or any other material containing free silica or any other operation involving such stone or material;

b)"Stone or any other material containing free silica" means a stone or any other solid material containing not less than 5(five) percent by weight of free silica.

3. Precautions in manipulations:- No manipulation shall be carried out in a factory or part of a factory unless one or more of the following measures, namely:-

a)damping the stone or other material being processed,

b)providing water spray,

c)enclosing the process,

d)isolating the process, and

e)providing localised exhaust ventilation.

are adopted so as to effectively control the dust in any place in the factory where any person is employed, at a level equal to, or below the maximum permissible level for silica dust as laid down in 'Table 2 appended to Rule 173.

Provided that such measures as abovesaid are not necessary if the process or operation itself is such that the level of dust created and prevailing does not exceed the permissible level referred to.

4.Maintenance of floors:-

1)All floors or places where fine dust is likely to settle on and whereon any person has to work or pass shall be of impervious material and maintained in such condition that they can be thoroughly cleaned by a moist method or any other method which would prevent dust being airborne in the process of cleaning.

2)The surface of every floor of every work room or place where any work is carried on or where any person has to pass during the course of his work, shall be cleaned of dust once at least during each shift after being sprayed with water or by any other suitable method so as to prevent dust being airborne in the process of cleaning.

5.Prohibition relating to young persons:- No young person shall be employed or permitted to work in any of the operations, involving manipulation or at any place where such operations are carried on.

6.Medical facilities and records of examination and tests:-

1)The occupier of every factory to which the schedule applies shall:-

a)employ a qualified medical officer for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector and

b)Provide to the said medical officer all the necessary facilities for the purpose referred to in clause (a)

2)The record of medical examination and appropriate tests carried out by the said Medical Officer shall be maintained in a separate register approved by

the Chief Inspector, which shall be kept readily available for inspection by the Inspector.

7.Medical examination by Certifying Surgeon:-

1)Every worker employed in the processes specified in paragraph 1, shall be examined by a Certifying Surgeon within 15(fifteen) days of his first employment. Such medical examination shall include pulmonary function tests and chest x-ray. No worker shall be allowed to work after (15) (fifteen) days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.

2)Every worker employed in the said process shall be re-examined by a Certifying Surgeon at least once in every 12(twelve) months. Such examination shall, wherever the Certifying Surgeon considers appropriate, inclusive all tests as specified in sub-paragraph (1) except chest X-Ray which will be once in three years.

3)The Certifying Surgeon after examining a worker, shall issue a certificate of fitness in

Form 28. The record of examination and re-examinations carried out shall be entered in the certificate and the certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under subparagraphs (1) & (2), including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 29.

4)The certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.

5)If at any time the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein would involve special danger to the health of the worker, he shall make a record of his findings in those documents should also include the period for which he considers that the said person is unfit for work in the said processes. The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the person affected shall be suitably rehabilitated.

6)No person who has been found unfit to work as said in subparagraph (5) above shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.

8.Exemptions:- If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the processes or for any other reason, all or any of the provisions of this schedule is not necessary for protection of the workers in the factory, the Chief Inspector may issue a certificate in writing, which he may in his discretion revoke at any time, exempt such factory from all or any of such provisions subject to such conditions, if any, as he may specify therein.

Schedule XXVII
Fire Works Manufacture and Match Factories

1.Application: The provisions of this schedule shall apply to all manufactories and processes incidental thereto carried on in any fire works manufactory or a match works and shall be in addition to and not in derogation of any provisions of the Factories Act. 1948 and the Tripura Factories Rules, 1996 or of any other Act or Rules that are applicable to fire works manufactories and match factories.

2.Definition:

a) “Fire Works Manufactory” means any factory or such part of any factory wherein the following chemicals or combination of chemicals and materials are being used for the manufacture of crackers, sparklers, caps, fuses, blasting powder and fire works:

Salpetre;
Pyrotechnic Alluminium Powder
Barium Nitrate
Charcoal
Potassium
Chloride Red
Phosphorous Gum
Dextrine
Stronium Nitrate
Magnesium Powder
Copper Coated Wires

Steel fillings or Iron fillings
G I Wire
Gun Powder (Black Powder)

b)"Match Works" means any establishment which manufactures safety matches or colour matches by the use of chemicals mentioned in clause (a).

c)"Breathing Apparatus" means a device covering mouth or nose with necessary connections by means of which a person using it in a poisonous asphyxiating or irritant atmosphere breaths ordinary air or any other suitable apparatus approved in writing by the Chief Inspector in this behalf.

3.Buildings:

a)The building of any fire works manufactory or match factory shall conform to the standards prescribed under the Indian Explosive Act, 1884.

b)No building inside a fire works manufactory shall have a first floor at any time.

c)In match works, provided with a first floor, there shall be 2 staircases leading from the first floor to the ground irrespective of the number of persons employed in the first floor and one of the staircases shall be of masonry construction or of non-inflammable materials;

d)All doors shall open outwards and all the doorways shall be kept free from obstructions;

e)All doors of workrooms shall not be less than 1.2 metres in width or less than 2 metres in height;

f)The floors of all work rooms including mixing sheds shall be completely covered by a rubber sheet having a smooth surface and having a thickness of atleast 3 mm.If the floor cannot be covered by a single rubber sheet, more than one rubber sheet may be used, so that each sheet is overlapped by the other atleast 150 mm; and

g)Mixing sheds shall be 30.5 metres away from all other sheds and be separated by baffle walls opposite each exit of the mixing shed.

4.House-keeping:-

a)Every part of ways, works, machinery and plant shall be maintained in a clean and tidy condition;

b)Any spillage of materials shall be cleaned without delay;

c)Close platforms, passages and gangways shall be kept free of temporary obstructions.

5.Electrical Equipment:-

a)If at any time, use of electricity is allowed in the factory, all leads, etc, shall be in conduits with flame-proof junctions;

b)Electrical supply shall never be through a lamp even with a non-conducting handle.

6.Protective clothing:-

a)Under no circumstances clothes made of artificial fibre like terelene, etc, be allowed inside the factory;

b)All workers shall be supplied with asbestos aprons especially to cover the chest, gonads and thighs;

c)Breathing apparatus shall be used in mixing sheds to avoid workers inhaling poisonous fumes in the event of an untoward reaction.

d)In mixing sheds where aluminium and magnesium powders are used "anti-stat" foot-wear to combat static electricity shall be supplied.

e)All protective equipments shall be maintained in an efficient condition and also shall be maintained in a clean and hygienic condition.

7.Match Factory:- In match factories:-

i)the residue of the head composition shall not in any way be mixed with the residue of the friction composition;

ii)the rooms comprising the two mixing departments, namely, (a) head composition and (b) friction composition shall be entirely separated from each other and the drains from these two departments shall be kept entirely separate;

iii)rubbish containing the residues of the head composition and friction composition shall be kept and burnt separately;

iv)department in which completed matches (matches with heads on) are stored shall be separated from all other departments by means of fire-proof walls and doors providing adequate means of escape in case of fire;

Provided that the Chief Inspector may, subject to such conditions, as he may deem necessary, exempt any factory in existence on the first January 1935, from the provisions of this clause;

exempt any factory in existence on the first January 1935, from the provisions of this clause;

v)Splints, veneers and other materials in excess of the quantity required for the day's manufacture shall be kept in separate rooms of the factory where no manufacturing process is carried on. No manufactured material shall be stored anywhere in the factory compound for more than 5(five) days after the manufacture except in the storage godowns;

Provided that nothing contained in this clause shall apply to splints and veneers in cases stored in peeling and box making departments;

vi)Store room for matches shall be entirely separated by fire proof walls from the buildings used for manufacture; and

vii)The racks in the dipped splints room shall have sides, top and the rear part provided with non-inflammable materials.

8.Precautions to be taken in connection with manufacture of fuses used in crackers, etc:-

a)Bundles of fuses shall be handled by carrying and not dragging them on the floor;

b)Drying of fuses after wrapping shall be carried out on platforms away from workrooms;

c)Cutting shall be done by experienced workers employed only for this purpose and under proper supervision;

d)Cutting shall be done on a large masonry platform covered with a tarpaulin and kept free from grit and pebbles;

e)Cutting shall be done on a raised platform so that workers can work standing, Cutting must be done by placing the fuse on wooden sleepers kept over blocks of wood. Brick shall not be used beneath the wooden reapers; and

f)Workers, while on dangerous operations, shall not wear clothing seqn with ferrous or steel buttons, buckles or attachments. They shall not carry on their persons, iron knives, keys, etc.

9.Employment of women and children:- Women workers and young persons below 18 (eighteen) years of age shall not be employed on operations where chemicals are mixed and where fuses are cut.

10.General:

a)No person other than a factory worker and/or an inspecting officer or others connected with the manufacturing process shall be allowed to enter the working area.

b)Cardboard containers and trays without steel nails shall be used for storage and day to day working purposes.

c)During the manufacture of fuses only brass or non ferrous knives shall be used and drying of fuses shall be away from all workrooms.

d)Door mats shall be provided outside the workrooms and near all drying platforms and where fuses are cut for the workers to clean their feet.

e)At no time, mixing materials shall exceed the quantity that is required for the manufacture of mixing for half an hour operation only.

f)For filling up chemicals in the inner tube of crackers, only aluminium or plastic rings shall be used and not galvanized iron rings.

g)Buckets, containers, hoops, locks, nails, screws bolts, nuts, knives, scissors, etc made up of iron shall not be used within the factory premises.

h)Wooden racks without iron nails shall be used for drying paper cap sheets, in amorcess factories.

i)Wooden racks used for drying paper sheets shall be provided with asbestos or other fire resistant sheets on the three sides leaving the front side open.

j)Dried paper cap sheets shall be carried in wooden trays with four compartments (partitioned) each compartment (partition) carrying a single sheet.

k)Each manufacturing shed of a fire works shall have atleast two doors facing each other. The doors provided to the worksheds of adjacent rows shall not face each other.

l)Not more than four persons shall be employed or allowed at any one time in any one building in which explosive is being manufactured.

11.Display of Notices: The following notices in the local language understood by the majority of workers shall be displayed at a conspicuous place in the factory.

Smoking is strictly prohibited.

1)No one shall carry matches or other igniting materials into the factory.

2)No worker shall be in a workroom or area where no work has been assigned to him.

3)If anything untoward happens in any shed all workers shall dash to the gates which serve as outgates of the factory and in no circumstances be curious to see what has happened in the affected shed.

4)Any spillage of materials should be cleaned without any delay.

5)Wearing of clothes made of artificial fibre like terene, terelene etc is prohibited. Clothing sewn with ferrous or steel buttons or buckles or attachments should not be worn.

6)Foot wears with iron nails should not be used.

7)Workers should not carry with themselves iron knives and iron keys etc.

12.First Aid Boxes:

a)The materials required under Rule 124 shall be kept in the First Aid Box. In addition , four stretchers shall be available for every 20 (twenty) persons employed in the premises.

b)Adequate amount of burn dressings and 24 ounces of coconut oil be used as the first remedy for burns shall be kept in the First Aid Box.

c)Persons who are in charge of First Aid Boxes shall be those who possess the certificate granted by the St. John’s Ambulance Association for rendering first aid.

13.Exemption: If the Chief Inspector is satisfied in respect of any factory or any process that, owing to the special conditions or special methods of work or by reason of the Frequency of the process or for other reason the application of all or any of the provisions of the schedule to the Factory or process, or for the persons employed in such factory or process is not necessary, he may by order in writing exempt such factory or part of the factory or process or any part of the factory or person from all or any of these provisions subject to such conditions as he may deem expedient to ensure safety and health of the workers.

The chief Inspector may at any time in his discretion revoke such order without assigning any reason.

Schedule XXVIII
Composing, Printing, Binding and Processes and/or Operations incidental thereto

1.Application: This schedule shall supply to all factories with any or all of the types of facilities available for Composing, Printing, Binding and Processes and/or Operations incidental thereto.

2.Definitions:

"Video Display Terminal (VOT)" means an alphanumeric or graphic display screen regardless of display process

employed. 3. .VDT's check/inspection:

The occupier shall ensure that:

a)every VDT installed carry a certificate from the manufacturer that this model has been approved by the competent authority for radiation protection and the emission level at 5 cm from the surface is below 0.5 mrem/h.

b)shielding of scan transformers are effective.

c)the VDT is maintained in such a way that its use is safe and without risk to health; and

d)wherever a number of VDTs are in use, they shall be so distributed and located that their combined effect is not hazardous and their emission levels are monitored to keep the levels within permissible limits.

4.Provision for correction glasses:

The occupier shall provide at his cost correction glasses of the appropriate power to workers employed on VDTs who are using power glasses for vision.

5.Special Provisions for pregnant women:

Necessary measures like provision for proper work station shall be made so that pregnant women employees perform duties without excessive discomfort and fatigue.

6.Control of Ultraviolet Rays, Ozone and fumes in work atmosphere:

Whatever ultraviolet rays are used, such as for drying, they shall be properly shielded by interlock guards and the units are well ventilated.

7.Collection, Development, Dissemination, Disclosure etc, for information:

No chemical shall be stored or used in any process or operation unless full information regarding the hazards involved and the required safety measures are collected ar developed and made known to Chief Inspector and disseminated to workers.

8.Medical Examination:

a)Medical examination of workers shall be carried out as prescribed under Rule 165 (4).

b)Pre-employment: Optahalmological examination shall be carried out for each worker before initial employment on VDT operation to identify any diseases of the eye which pre-disposes the individual to visual disorders including photo sensitive epilepsy while using VDT.

c)Necessary annual opthalmological examination shall be carried out for each worker employed on VDT.

d)Any worker who complains of visual discomfort or visual disorder shall be opthalmologically re-examined immediately.

Schedule XXIX

Processing of Cashew nut

1.Application:- This schedule shall apply to all factories in which roasting, scrubbing and shelling of cashewnuts or extracting oil from cashewnuts or cashewnut shells are carried on.

2.Prohibition of employment of women and young persons:- No women or young person shall be employed in any of the processes specified in paragraph 1 except in shelling of roasted cashewnuts.

3.Protective clothing and equipment:- The Occupier shall provide and maintain for the use of all persons employed in reasting and scrubbing of cashewnuts or extracting oil from cashewnuts or cashewnut shells-

a)a suitable rubber or washable leather gloves:

b)suitable type of impervious aprons with sleeves to cover body down to knees and shoulders; and

c)suitable type of footwear to afford protection to feet and legs against cashewnut oil; and for the workers employed in cashewnut shelling, either

d)a protective ointment containing 10% of shellac, 55% of alcohol, 10% of sodium perrborate, 5% of carbitol and 20% talc; or

e)sufficient quantity of kaolin and coconut oil; and

f)any other material or equipment which the Chief Inspector may deem to be necessary for the protection of the workers.

4.Use of protective clothing and equipment:- Every person employed in processes specified in paragraph 1 shall make use of protective clothing and equipment supplied and arrangements shall be made by the occupier to supervise its use, maintenance and cleanliness.

5.Disposal of shells, ashes, or oil of cashewnut:-

1)Shells, ashes or oil of cashewnut shall not be stored in any room in which workers are employed and shall be removed at least twice a day to any pit or enclosed place in the case of shells and ashes and to closed containers kept in a separate room in the case of oil.

2)No worker shall be allowed to handle shells or oil of cashewnuts without using the protective clothing or equipment provided under paragraph 3 above.

6.Floors of workrooms:- The floor of every workroom in which processes specified in paragraph 1 are carried on, shall be of a hard material so as to be smooth and impervious and of even surface and shall be cleaned daily, and spillage of any cashewnut oil in any workroom shall be washed with soap and cleaned immediately.

7.Seating accommodation:- Workers engaged in shelling of cashewnuts shall be provided with adequate seats or work benches which shall be cleaned daily.

8.Messrooms:-

1)There shall be provided and maintained for the use of all persons employed in processes specified in paragraph 1, a suitable restroom furnished with sufficient tables and chairs or benches.

2)Separate lockers shall be provided where food, etc. shall be stored by workers before it is consumed in the restroom.

9.Food, drinks, etc, prohibited in workrooms:- No food, drink, pan, supari or tobacco shall be brought or consumed by any worker in any room in which processes specified in paragraph 1 are carried out and no person shall remain in any such room during intervals for meals or rest.

10.Washing facilities:- Where roasting, scrubbing and shelling of cashewnuts or extracting oil from cashewnuts or cashewnut shells is carried on, there shall be provided and maintained in a clean state and good repair washing facilities, with a sufficient supply of soap, coconut oil, nail brushes and towels at the scale of one tap or stand pipe for every 10 workers, and the taps or stand pipes shall be spaced not less than 1.2 meters apart.

11.Time allowed for washing:- Before each meal and before the end of the day's work, at least ten minutes, in addition to the regular meal times, shall be allowed for washing, to each person employed in processes specified in paragraph 1.

12.Smoke or gas produced by roasting cashewnuts. Where smoke or gas is produced in the operation of roasting, provision shall be made for removing the smoke or gas through a chimney of sufficient height and capacity or by such other arrangements as may be necessary to prevent the gas or smoke escaping into the air or any place in which workers are employed.

13.Storage of protective equipment:- A suitable room or a portion of the factory suitably partitioned off, shall be provided exclusively for the storage of all the protective equipment supplied to the workers and no such equipment shall be stored in any place other than the room or places so provided.

14.Medical facilities and records of examinations and tests:-

1)The Occupier of every factory to which this schedule applies, shall:-

a)employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector; and

b)provide to the medical practitioner all the necessary facilities for the purpose referred to in clause (a).

2)The said medical practitioner shall inspect daily the hands and feet of all the persons employed in the processes specified in paragraph 1.

3)The record of such examinations carried out by the medical practitioner shall be maintained in a separate register approved by the Chief Inspector, which shall be kept readily available for inspection by the Inspector.

4)The first-aid box maintained shall also contain Burrough's Solution (1:20) and aqueous solution of tannic acid (10%) for treatment of cases of dermatitis.

15.Medical examination by Certifying Surgeon:-

1)Every worker employed in the processes specified in paragraph 1 shall be examined by a Certifying Surgeon within 15 days of his first employment. Such examinations shall include skin test for dermatitis and no worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.

2)Every worker employed in the said processes shall be re-examined by a Certifying Surgeon at least once in every three calendar months. Such examinations shall, wherever the Certifying Surgeon considers appropriate, include asking test for dermatitis.

3)The Certifying Surgeon after examining a worker, shall issue a Certificate of Fitness in

Form 28. The record of examination and re-examinations carried out shall be entered in the Certificate and the Certificate shall be

kept in the custody of the manager of the factory. The record of each examination carried out under subparagraph (1) and (2), including the nature and the results of these tests, shall also be entered by the Certifying Surgeon in a health register in

Form 29.

4)The Certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.

5)If at any time the Certifying Surgeon, is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance there in would involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit to work in the said processes. The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the person affected shall be suitably rehabilitated.

6)No person who has been found unfit to work as said in subparagraph (5) shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.

16.Exemption:- The Chief Inspector may grant exemptions from the operation of any of these where he is satisfied that their observance is not necessary for safeguarding the health of the workers.

Schedule XXX
Printing presses and type foundries and certain lead processes carried therein.

1.Definitions:- For the purposes of this schedule:-

a)"lead material" means material containing not less than five percent of lead;

b)"lead process" means-

i)the melting of lead or any lead material for casting and mechanical compressing;

ii)the recharging of machines with used lead material;

iii)any other work including removal of dress from melting pots and cleaning of plungers; and

iv) manipulation, movement or other treatment of lead material.

c)"efficient exhaust draught" means localised ventilation effected by heat or mechanical means, for the removal of gas, vapour, dust or fumes so as to prevent them from escaping into the air of any place in which work is carried on. No draught shall be deemed efficient which fails to remove gas, vapour, fume or dust at the point where they originate.

2.Exhaust draught:-

1)None of the following processes shall be Carried on except with an efficient exhaust draught unless carried on in such a manner as to prevent free escape of gas, vapour, fumes or dust into any place in which work is carried on, or unless carried on in electrically heated and thermostatically controlled melting pots:-

a)melting lead material or slugs; and

b)heating lead material so that vapour containing lead is given off.

2)Such exhaust draught shall be effected by mechanical means and so contrived as to operate on the dust, fume, gas or vapour given off as closely as may be at its point of origin.

3)Prohibition relating to women and young persons:- No woman or young person shall be employed or permitted to work in any lead process.

4.Separation of certain processes:- Each of the following processes shall be carried on in such a manner and under such conditions as to secure effectual separation from one another and from any other processes:-

a)melting of lead or any lead material;

b)casting of lead ingots; and

c)mechanical composing.

5.Container for dress:- A suitable receptacle with tightly fitting cover shall be provided and used for dress as it is provided from every melting pot, such receptacle shall be kept covered while in the workroom near the machine except when the dress is being deposit therein.

6.Floor of workroom:- The floor of every workroom where lead process is carried on shall be-

a)of cement or similar material so as to be smooth and impervious to water;

b)maintained in sound condition; and

c)shall be cleansed throughout daily after being thoroughly damped with water at a time when no other work is being carried on at the place.

7.Messroom:- There shall be provided and maintained for the use of all persons employed in a lead process and remaining on the premises during the meal intervals, a suitable messroom which shall be furnished with sufficient tables and benches.

8.Washing facilities:- There shall be provided and maintained in a clean state and in good repair for the use of all persons employed in a lead process:-

a)a wash place with either:-

i)a trough with a smooth impervious surface fitted with a waste pipe without plug, and of sufficient length to allow at least 60 centimetres for every five such persons employed at anyone time and having a constant supply of water from taps or jets above the trough at intervals of not more than 60 centimetres; or

ii)at least one wash basin for every five such persons employed at any one time fitted with a waste pipe and plug and having an adequate supply of water laid on or always readily available; and

b)a sufficient supply of clean towels made of suitable material, renewed daily with a sufficient supply of soap or other suitable cleansing material.

9.Food, drinks, etc. prohibited in workrooms:- No food, drink, pan and supari or tobacco shall be consumed or brought by any workers into any workroom in which any lead process is carried on.

10.Medical facilities and records of examinations and tests:-

1)The occupier of every factory to which the schedule applies, shall:-

a)employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector; and

b)provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause(a).

2)The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector, which shall be kept readily available for inspection by the Inspector.

11.Medical examination by Certifying Surgeon:-

1)Every worker employed in a lead process shall be examined by a Certifying Surgeon within 15 days of his first employment. Such examination shall include tests for lead in urine and blood, ALA in urine, haemoglobin, stippling of cells and steadiness test. No worker, shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.

2)Every worker employed in the said process shall be re-examined by a Certifying Surgeon at least once in every six calendar months. Such re-examination shall, wherever the Certifying Surgeon considers appropriate, include tests as specified in sub-paragraph(1).

3)The Certifying Surgeon after examining a worker, shall issue a Certificate of Fitness in

Form 28. The record of examination and re-examination carried out shall be entered in the Certificate and the Certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under subparagraphs (1) and (2), including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 29.

4)The Certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.

5)If any time the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said process on the ground that continuance therein would involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in these documents should include the period for which he considers that the said person is unfit for work in the said processes. The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the person affected shall be suitably rehabilitated.

6)No person who has been found unfit to work as said in sub-paragraph (5) above shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.

12. Exemption:- Where the Chief Inspector is satisfied that all or any of the provisions of this schedule are not necessary for the protection of persons employed, he may by certificate in writing exempt any factory from all or any of such provisions subject to such conditions as he may specify therein. Such certificate may at any time be revoked by the Chief Inspector.

Schedule XXXI

Manufacture of pottery

1.Savings:- These provisions shall not apply to a factory in which any of the following articles, but no other pottery, are made

a)unglazed or salt glazed bricks and tiles; and

b)architectural terra-cotta made from plastic clay and either unglazed or glazed with a leadless glaze only,

2.Definitions:- For the purposes of this schedule:-

a)pottery" includes earthenware, stoneware, porcelain, china tiles, any other articles made from such clay or from a mixture containing clay and other materials such as quartz, flint, feldspar, and gypsum;

b)"efficient exhaust draught" means localised ventilation ventilation effected by mechanical or other means for removal of dust or fume so as to prevent it from escaping into air of any place in which work is carried on. No draught shall be deemed efficient which fails to remove effectively dust or fume generated at the point where dust of fume originates;

c)"fettling" includes scalloping, towing, sand papering, sand sticking, brushing or any other process of cleaning of potteryware in which dust in given off;

d)"leadless glaze" means a glaze which does not contain more than one per cent of its dry weight; of a lead compound calculated as lead monoxide;

e)"low solubility glaze" means a glaze which does not yield to dilute hydrochloric acid more than five per cent of its dry weight, of a soluble

lead compound calculated as lead monoxide when determined in the manner described below;

A weighed quantity of the material which has been dried at 100 degrees centigrade and thoroughly mixed shall be continuously shaken for one hour at the common temperature with 1000 times its weight of an aqueous solution of hydrochloric acid containing 0.25 per cent by weight of hydrogen chloride. This solution shall thereafter be allowed to stand for one hour and then filtered. The lead salt contained in the clear filtrate shall then be precipitated as lead sulphide and weighed as lead sulphate;

f)"ground or powdered flint or quartz" does not include natural sands; and

g)"potter's shop" includes all places where pottery is formed by pressing or by any other process and all places where shaping, fettling or other treatment of pottery articles prior to placing for the biscuit fire is carried on.

3.Efficient exhaust draught:- The following processed shall not be carried on without the use of an efficient exhaust draught:-

a)all processes involving the manipulation or use of a dry and unfritted lead compound;

b)fettling operations of any kind, whether on greenware or biscuit, provided that this shall not apply to the wet fettling, and to the occasional finishing of pottery articles without the aid of mechanical power;

c)sifting of clay dust or any other material for making tiles or other articles by pressure, except where-

i)this is done in a machine so enclosed as to effectually prevent the escape of dust; or

ii)the material to be shifted is an damp that no dust can be given off;

d)pressing of tiles from clay dust, an exhaust opening being connected with each press, and pressing from clay dust of articles other than tiles, unless the material is so damp that no dust is given off;

e)fitting of tiles made from clay dust by pressure, except where the fetting is done wholly on, or with, damp material, and fetting of other articles made from clay dust, unless the material is so damp that no dust is given off;

f)process of loading unloading of sugars where handling and manipulation of ground and powdered flint, quarts, aluminin or other materials are involved;

g)brushing of earthern wars biscuit, unless the process is carried on in a room provided with efficient general mechanical ventilation or other ventilation which is certified by the Inspector as adequate having regard to all the circumstances of the case;

h)fetting of biscuitware which has been fired in powdered flint or quarts except where this is done in machines so enclosed as to effectually prevent the escape of dust;

i)where cleaning after the application of glaze by dipping or other process;

j)crushing and dry grinding of materials for pottery bodies and saggars, unless carried on in machines so enclosed as to effectively prevent the escape of dust or is so damp that no dust can be given off;

k)sieving or manipulation of powdered flint, quartz, clay grog or mixture of these materials unless it is so damp that no dust can be given off;

l)grinding of tiles on a power driven wheel unless an efficient water spray is

used on the wheel;

m)lifting and conveying of materials by elevators and conveyors unless they are effectively enclosed and so arranged as to prevent escape of dust into the air in or near to any place in which persons are employed;

n)preparation or weighing out of flow material, lawning of dry colours, colour dusting and colour blowing;

o)mould making unless the bins or similar receptacles used for holding plaster of paris are provided with suitable covers; and

p)manipulation of calcined material unless the material has been made and remains so wet that no dust is given off.

4.Separation of processes:- Each of the following processes shall be carried on in such a manner and under such conditions as to secure effectual separation from one another, and from other wet processes:-

a)crushing and dry grinding or sieving of materials, fettling, pressing of tiles, drying of clay and greenware, loading and unloading of saggars; and

b)all processes involving the use of a dry lead compound.

5.Prohibition on use of glaze:- No glaze which is not a leadless glaze or a low solubility glaze shall be used in a factory in which pottery is manufactured.

6.Prohibition relating to women and young persons:- No woman or young person shall be employed or permitted to work in any of the operations specified in paragraph 4, or at any place where such operations are carried on.

7.Provision of screen to potter's wheel:- The potter's wheel (Jolly and Jigger) shall be provided with screens or so constructed as to prevent clay scrapings being thrown of beyond the wheel.

8.Control of dust during cleaning:-

1)All practical measures shall be taken by damping or otherwise to prevent dust arising during cleaning of floors.

2)Damp saw-dust or other suitable material shall be used to render the moist method effective in preventing dust rising into the air during the cleaning process which shall be carried out after work has ceased.

9.Floor of certain workrooms:- The floors of potter's shops, slip houses, dipping houses and ware cleaning rooms shall be hard, smooth and impervious and shall be thoroughly cleaned daily by an adult male using a moist method.

10.Protective equipment:-

1)The occupier shall provide and maintain suitable overalls and head coverings for all persons employed in process included under paragraph 3.

2)The occupier shall provide and maintain suitable aprons of a waterproof or similar material, which can be sponged daily, for the use of the dippers, dippers assistants, throwers, jolly workers, casters, mould makers and filter press and pug mill workers.

3)Aprons provided in pursuance of paragraph 10(2) shall be thoroughly cleaned daily by the wearers by sponging or other wet process. All overalls and head coverings shall be washed, cleaned and mended at least once a week, and this washing, cleaning or mending shall be provided for by the occupier.

4)No person shall be allowed to work in emptying sacks of dust materials, weighing out and mixing of dusty materials and charging of ball mills and plungers without wearing a suitable and efficient dust respirator.

11.Washing facilities:-

1)The occupier shall provide and maintain, in a clean state and in good repair for the use of all persons employed in any of the processes specified in paragraph 3 -

a)a wash place under cover with either -

i)a trough with smooth impervious surface fitted with a waste pipe without plug, and of sufficient length to allow at least 60 centimeters for every five such persons employed at any one time, and having a constant supply of clean water from taps or jets above the trough at intervals of not more than 60 centimeters; or

ii)at least one tap or stand pipe for every five such persons employed at any one time, and having a constant supply of clean water, the tap or stand pipe being spaced not less than 120 centimeters apart; and

b)a sufficient supply of clean towels made of suitable material changed daily, with sufficient supply of nail brushes and soap.

12.Time allowed for washing:- Before each meal and before the end of the day's work, at least ten minutes, in addition to the regular meal times, shall be allowed for washing to each person employed in any of the processes mentioned in paragraph 3.

13.Messroom:-

1)There shall be provided and maintained for use of all persons remaining within the premises during the rest intervals, a suitable messroom providing accommodation of 0.93 square meter per head and furnished with:-

a)a sufficient number of tables and chairs or benches with back rest;

b)arrangements for washing utensils;

c)adequate means for warming food; and

d)adequate quantity of drinking water,

2)The room shall be adequately ventilated by the circulation of fresh air and placed under the charge of a responsible person and shall be kept clean.

14.Food, drinks, etc, prohibited in workrooms:- No food, drink, pan and supari or tobacco shall be brought into, or consumed by any worker in any workroom in which any of the processes mentioned in paragraph 3 are carried on and no person shall remain in any such room during intervals for meals or rest,

15.Cloakrooms etc, :- There shall be provided and maintained for the use of all persons employed in any of the processes mentioned in paragraph 3;

a) a cloakroom for clothing put off during working hours and such accommodation shall be separate from any mess room; and

b) separate and suitable arrangements for the storage of protective equipment provided under paragraph 10,

16.Medical facilities and records of examinations and tests:-

1)The occupier of every factory in which manufacture of pottery is carried on, shall

a)employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector of Factories; and

b)provide to the said medical practitioner all the necessary

facilities for the purpose referred to in clause(a)

2)The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector, which shall be kept readily available for inspection by the Inspector.

17.Medical examination by Certifying Surgeon:-

1)Every worker employed in any process mentioned under paragraph 3, shall be examined by a Certifying Surgeon within 15 days of his first employment. Such examination shall include tests for lead in urine and blood, ALA in urine, haemoglobin content, stippling of cells and pulmonary function tests and chest x-ray for workers engaged in processes mentioned in clauses (a) and (n) of paragraph 3 and pulmonary function tests and chest x-rays for the others. No worker shall be allowed to work after 15 days of his first employment in the factory unless certifies fit for such employment by the Certifying Surgeon.

2)All persons employed in any of the processes included under sub-paragraphs 3(a) and 3(n) shall be examined by a certifying Surgeon once in every 3 calendar months. Those employed in any other processes mentioned in the remaining sub-paragraphs of paragraph 3 shall be examined by a Certifying surgeon once in every twelve calendar months.

Such examinations in respect of all the workers shall include all the tests as specified in sub-paragraph (1) except chest x-ray which will be once in 3 years.

3)The Certifying Surgeon after examining a worker, shall issue Certificate of Fitness in

Form No. 28. The record of examination and re-examinations carried out shall be entered in the Certificate and the Certificate shall be kept in the custody of the manager of the factory. The record of such examination carried out under sub-paragraph(1) and (2) including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form No. 29.

4)The Certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector,

5)If at any time the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein would involve special danger to the health of the worker, he shall make a record of his findings in the said Certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit for work in the said processes. The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the person affected shall be suitably rehabilitated.

6)No person who has been found unfit to work as said in subparagraph (5) above shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.

18.Exemption:- If in respect of any factory the Chief Inspector is satisfied that all or any of the provisions of this schedule are not necessary for the protection of the persons employed in such factory, he may by a certificate in writing exempt such factory from all or any of such provisions, subject to such conditions as he any specify therein. Such certificate may at any time be revoked by the Chief Inspector without assigning any reasons.

Schedule XXXII
Operation in Foundry

1.Application:- Provisions of this schedule shall apply to all parts of factories where any of the following operations or processes are carried on;

a)the production of iron castings or, as the case may be, steel castings by in moulds made of sand, loam, moulding composition or other mixture of materials, or by shell moulding, or by centrifugal casting and any process incidental to such production;

b)the production of non-ferrous castings by casting metal in moulds made of sand, loam, metal, moulding composition of other material or mixture of materials, or by shell mouldings, die-casting (including pressure diecasting), centrifugal casting or continuous casting and any process incidental to such production; and

c)the melting and casting of non-ferrous metal for the production of ingots, billets, slabs or other similar products, and the stripping thereof;

but shall not apply with respect to:-

a)any process in which metal is obtained by a reducing operation or any process incidental to such operation; or

b)the production of steel in the form of ingots; or

c)any process in the course of the manufacture of solder or any process incidental to such manufacture; or

f)the melting and casting of lead or any lead-based alloy for the production of ingots, billets; slabs or other similar products or the stripping thereof, or any process incidental to such melting, casting or stripping.

2.Definition:- For the purpose of this schedule:-

a)“approved respirator” means a respirator of a type approved by the Chief Inspector;

b)“cupola or furnace” includes a receiver associated therewith;

c)“dressing or fettling operations” includes stripping and other removal of adherent sand, cores, runners, risers, flash and other surplus metal from a casting and the production of reasonably clean and smooth surface, but does not include (a) the removal of metal from a casting when performed incidentally in connection with the machinering or assembling of castings after they have dressed or fettled, or (b) any operation which is knock-out operation within the meaning of this schedule;

d)“foundry” means those parts of a factory in which the production of iron or steel or non-ferrous casting (not being the production of pig iron or the production of steel in the form of ingots) is carried on by casting in moulds made of sand, loan, moulding composition or other mixture of materials, or by shell moulding or by centrifugal casting in metal moulds lined with sand, or die casting including pressure die castings, together with any part of the factory in which any of the following processes are carried on as incidental processes in connection with and in the course of, such production, namely, the preparation and mixing of materials used in foundry process, the preparation of moulds and cores, knock out operations and dressing

or fettling operations;

e)"knock-out operations" means all methods of removing castings from moulds and the following operations, when done in connection therewith, namely, stripping, coring-out and the removal of runners and risers;

f)"pouring aisle" means an aisle leading from a main gangway or directly from a cupola or furnace to where metal is poured into mould.

3.Prohibition of use of certain materials as parting materials:-

1)A material shall not be used as a parting material if it is a material containing compounds of silicon calculated as silica to the extent more than 5 per cent by weight of the dry material;

Provided that this prohibition shall not prevent the following being used as a parting material if the material does not contain an admixture of any other silica -

a)Zirconium silicate (zircon)

b)Calcined china clay

c)Calcined aluminous fireclay

d)Sillimanite

e)Calcined or fused alumina

f)Olivine

g)Natural sand

2)Dust or other matter deposited from a fettling or blasting process shall not be used as a parting material or as a constituent in a parting material.

4.Arrangement and storage:- For the purposes of promoting safety and cleanliness in workrooms the following requirements shall be observed:-

a)moulding boxes, loam plates, ladles, patterns, pattern plates, frames, boards, box weights, and other heavy articles shall be so arranged and placed as to enable work to be carried on without unnecessary risk;

b)suitable and conveniently accessible racks, bins or other receptacles shall be provided and used for the storage of other gear and tools;

c)where there is bulk storage of sand, fuel, metal scrap or other materials or residues, suitable bins, bunkers or other receptacles shall be provided for the purpose of such storage.

5.Construction of floors:-

1)Floors of indoor workplaces in which the processes are carried on, other than parts which are of sand, shall have an even surface of hard material.

2)No part of the floor of any such indoor workplace shall be of sand except where this is necessary by reason of the work done.

3)All parts of the surface of the floor of any such indoor workplace which are of sand shall, so far as practicable, be maintained in an even and firm condition.

6.Cleanliness of indoor workplaces:

1)All accessible parts of the walls of every indoor workplace in which the processes are carried on and of everything affixed to those wall shall be effectively cleaned by a suitable method to a height of not less than 4.2 metres from the floor at least once in every period of fourteen months. A record of the carrying out of every such effective cleaning in pursuance of this paragraph including the date (which shall be not less than five months nor more than nine

months after the last immediately preceding washing, cleaning or other treatment).

2)Effective cleaning by a suitable method shall be carried out at least once every working day of all accessible parts of the floor of every indoor workplace in which the processes are carried on, other than parts which are of sand; and the parts which are of sand shall be kept in good order.

7.Manual operations involving molten metal:-

1)There shall be provided and properly maintained for all persons employed on manual operations involving molten metal with which they are liable to be splashed, a working space for that operation:-

a)which is adequate for the safe performance of the work and

b)which, so far as reasonably practicable, is kept free from obstruction.

2)Any operation involving the carrying by hand of a container holding molten metal shall be performed on a floor all parts of which where any person walks while engaged in the operation shall be on the same level; Provided that, where necessary to enable the operation to be performed without undue risk, nothing in this paragraph shall prevent the occasional or exceptional use of a working space on a different level from the floor, being a space provided with a safe means of access from the floor for any person while engaged in the operation.

8.Gangways and pouring aisles:-

1)In every workroom to which this paragraph applies constructed, reconstructed or converted for use as such after the making of this schedule and, so far as reasonably practicable, in every other workroom to which this paragraph applies, sufficient and clearly defined main gangways shall be provided and properly maintained which:-

a)shall have an even surface of hard material and shall, in particular, not be of sand or have on them more sand than is necessary to avoid risk of flying metal from accidental spillage;

b)shall be kept, so far as reasonably practicable, free from obstruction;

c)if not used for carrying molten metal, shall be at least 920 millimetres in width;

d)if used for carrying molten metal shall be-

i)where truck ladles are used exclusively, at least 600 millimeters wider than the overall width of the ladle;

ii)where hand shanks are carried by not more than two men, at least 920 millimeters in width;

iii)where hand shanks are carried by more than two men, at least 1.2 metres in width; and

iv)where used for simultaneous travel in both directions by men carrying hand shanks, at least 1.8 metres in width.

2)In workroom to which this paragraph applies constructed, reconstructed or converted for use as such after the making of this Schedule, sufficient and clearly defined pouring aisles shall be provided and properly maintained which-

a)shall have an even surface of hard material and shall, in particular, not be of sand or have on them more sand than is necessary to avoid risk of flying metal from accidental spillage;

b)shall be kept so far as reasonable practicable free from obstruction;

c)if molten metal is carried in hand ladles or bull ladles by not more than two men per ladle, shall be at least 460 millimeters wide, but where any moulds alongside the aisle are more than 510 millimeters above the floor of the aisle, the aisle shall be not less than 600 millimeters wide;

d)if molten metal is carried in hand ladles or bull ladles by more than two men per ladle, shall be at least 760 millimeters wide;

e)if molten metal is carried in crane, trolley or truck ladles, shall be of a width adequate for the safe performance of the work.

3)Requirements of sub-paragraph (1) and (2) shall not apply to any workroom or part of a workroom if, by reason of the nature of the work done therein, the floor of that workroom or, as the case may be, that part of a workroom has to be of sand.

4)In this paragraph "workroom to which this paragraph applies" means a part of a ferrous or non-ferrous foundry in which molten metal is transported or used, and a workroom to which this paragraph applies shall be deemed for the purposes of this paragraph to have been constructed, reconstructed or converted for use as such after the making of this schedule if the construction, reconstruction or conversion thereof was begun after the making of this schedule.

9.Work near cupolas and furnaces:- No person shall carry out any work within a distance of 4 metres from a vertical line passing through the delivery end of any spout of cupola or furnace, being a spout used for delivering molten metal, or within a distance of 2.4 metres from a vertical line passing through the nearest part of any ladle which is in position at the end of such a spout, except, in either case, where it is necessary for the proper use of maintenance of a cupola or furnace that work should be carried out with in that distance of that work is being carried out at such time and under such conditions that there is no danger to the person carrying it out from molten metal which is being obtained from the cupola or furnace or is in a ladle in position at the end of the spout.

10.Dust and fumes:-

1)Open coal, coke or wood fires shall not be used for heating or drying ladles inside a workroom unless adequate measures are taken to prevent, so far as practicable, fumes or other impurities from entering into or remaining in the atmosphere of the workroom.

2)No open coal, coke or wood fires shall be used for drying moulds except in circumstances in which the use of such fires is unavoidable.

3)Mould stoves, core stoves and annealing furnaces shall be so designed constructed, maintained and worked as to prevent, so far as practicable, offensive or injurious fumes from entering into any workroom during any period when a person is employed therein.

4)All knock-out operations shall be carried out-

a)in a separate part of the foundry suitably partitioned off, being a room or part in which, so far as reasonably practicable, effective and suitable local exhaust ventilation and a high standard or general ventilation are provided; or

b)in an area of the foundry in which, so far as reasonably practicable, effective and suitable local exhaust ventilation is provided, or where

compliance with this requirement is not reasonably practicable, a high standard of general ventilation is provided.

5)All dressing or fettling operations shall be carried out:-

a)in a separate room or in a separate part of the foundry suitably partitioned off; or

b)in an area of the foundry set apart for the purpose; and shall, so far as reasonably practicable, be carried out with effective and suitable local exhaust ventilation or other equally effective means of suppressing dust, operating as near as possible to the point of origin of the dust.

11.Maintenance and examination of exhaust plant:-

1)All ventilation plant used for the purpose of extracting, suppressing or controlling dust or fumes shall be properly maintained.

2)All ventilating plant used for the purpose of extracting, suppressing or controlling dust or fumes shall be examined and inspected once every week by a responsible person. It shall be thoroughly examined and tested by a competent person at least once in every period of twelve months; and particulars of the results of every such examination and test shall be entered in an approved register which shall be available for inspection by an Inspector. Any defect found on any such examination and test shall be immediately reported in writing by the person carrying out the examination and test to the occupier or manager of the factory.

12.Protective equipment-

1)The occupier shall provide and maintain suitable protective equipment specified for the protection of workers;

a)Suitable gloves or other protection for the hands for workers engaged in handling any hot material likely to cause damage to the hands by burn, scald or scar, or in handling pig iron, rough castings or other articles likely to cause damage to the hands by cut or abrasion;

b)approved respirators for workers carrying out any operations creating a heavy dust concentration which cannot be dispelled quickly and effectively by the existing ventilation arrangements.

2)No respirator provided for the purposes of clause 1(b) has been worn by a person shall be worn by another person if it has not since been thoroughly cleaned and disinfected.

3)persons who for any of their time-

a)work at a spout of or attend to, a cupola or furnace in such circumstances that material there from may come into contact with the body, being material at such a temperature that its contact with the body would cause a burn; or

b)are engaged in, or in assisting with, the pouring of molten metal; or

c)carry by hand or move by manual power any ladle or mould containing molten metal; or

d)are engaged in knocking out at operations involving material at such a temperature that its contact with body would cause a burn;

Shall be provided with suitable footwear and gaiters which worn by them prevent, so far as reasonably practicable, risk of burns to his feet and ankles.

4)Where appropriate, suitably screens shall be provided for protection against flying materials (including splashes of molten metal and sparks and chips thrown off in the course of any process).

5)The occupier shall provide and maintain suitable accommodation for the storage and make adequate arrangements for cleaning and maintaining of the protective equipment supplied in pursuance of this paragraph.

6)Every person shall make full and proper use of the equipment provided for his protection in pursuance of sub-paragraph (1) and (4) and shall without delay report to the occupier, manager or other appropriate person any defect in, or less of, the same.

13.Washing and bathing facilities:-

1)There shall be provided and maintained in clean state and good repair for the use of all workers employed in the foundry-

a)a wash place under cover with either-

i)a trough with impervious surface fitted with a waste pipe without plug, and of sufficient length to allow at least 60 centimetres for every 10 such persons employed at any one time and having a constant supply of clean water from taps or jets above the trough at intervals of not more than 60 centimetres or

ii)at least one tap or stand pipe for every 10 such persons employed at any one time, and having a constant supply of clean water, the tap or stand pipe being spaced not less than 1.2 metres apart and

b)not less than one half of the total number of washing places provided under clause (a) shall be in the form of bath room.

c)a sufficient supply of clean towels made of suitable material changed daily, with sufficient supply of nail brushes and soap.

2)The facilities provided for the purposes of sub-paragraph (1) shall be placed in charge of a responsible person or persons and maintained in a clean and orderly condition.

14.Disposal of dross and skimmings:- Dross and skimmings removed from molten metal or taken from furnace shall be placed forthwith in suitable receptacles.

15.Disposal of waste:- Appropriate measures shall be taken for the disposal of all waste products from shell moulding (including waste burnt sand) as soon as reasonably practicable after the castings have been knocked-out.

16.Material and equipment left out of doors:- All material and equipment left out of doors (including material and equipment so left only temporarily or occasionally) shall be so arranged and placed as to avoid unnecessary risk. There shall be safe means of access to all such material and equipment and, so far as reasonably practicable, such access shall be by road ways or pathways which shall be properly maintained. Such roadways or pathways shall have a fire and even surface and shall, so far as reasonably practicable be kept free from obstruction.

17.Medical facilities and records of examinations and tests:-

1)The occupier of every factory to which the Schedule applies, shall -

a)employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector; and

b)provide to the said medical practitioner all the necessary facilities for

the purpose referred to in clause (a)

2)The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector, which shall be kept readily available for inspection by the Inspector.

18.Medical examination by Certifying Surgeon:-

1)Every worker employed in foundry shall be examined by a Certifying Surgeon within 15 days of his first employment. Such medical examination shall include pulmonary function tests and chest X-ray. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.

2)Every worker employed in the said processes shall be re-examined by a Certifying Surgeon at least once in every twelve months. Such examination shall, wherever the Certifying Surgeon considers appropriate, include all the tests as specified in sub-paragraph (1) except chest X-ray which will be once in 3 years.

3)The Certifying Surgeon after examining a worker, shall issue a Certificate of Fitness in

Form 28. The record of examination and re-examination carried out shall be entered in the Certificate and the Certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under subparagraphs (1) and (2), including the nature and the results off the tests, shall also be entered by the Certifying Surgeon in a health register in Form 29.

4)The certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.

5)If at any time the Certifying Surgeon is of the opinion that a worker is no linger fit for employment in the said processes on the ground that continuance therein would involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit for work in the said process. The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying surgeon, in which case the person affected shall be suitably rehabilitated.

6)No person who has been found unfit to work as said in sub-paragraph (5) above shall be re-employed or permitted to work in the said processes unless the Certifying surgeon, after further examination, again certifies him fit for employment in those processes.

19.Exemption:- If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the processes or for any other reason, all or any of the provisions of this schedule is not necessary for protection of the workers in the factory, the Chief Inspector may by a certificate in writing, which he may at his discretion revoke at any time, exempt such factory from all or any of such provisions subject to such conditions, if any, as he may specify therein.

Rule 161. Notification of accidents or dangerous occurrences:

2)When any accident specified in sub-clause (a) of clause 1 of the Schedule hereto appended or any dangerous occurrence specified in clause 2 of the said schedule takes place in a factory, the manager of the factory shall, within 4 hours of the happening of such accident or occurrence, send notice thereof by telephone, special messenger or telegram to the Inspector and where the accident is fatal or of such a serious nature that it is likely to prove fatal, notice as aforesaid shall also be sent to:

a)the District Magistrate or Sub-Divisional Officer,

b)the Officer-in-Charge of the nearest police station, and

c)the nearest relatives of the injured or deceased person.

2)The notice so given shall be confirmed by the manager of the factory to the authorities mentioned in sub-rule (1) by sending to them a written report in the case of an accident in

Form 30 and in the case of dangerous occurrence, in Form 31 within12 hours of the taking place of any such accident or occurrence referred to in that sub-rule.

3)If in the case of an accident, the injured person subsequently dies due to such accident, information of his death whenever known shall be sent by the manager by telephone, special messenger or telegram within 24 hours of the occurrence to:

a)the Inspector

b)the District Magistrate or Sub Divisional Officer

c)the Officer-in Charge of the nearest police station.

Explanation: For the purpose of this rule “accident of a serious nature” means an accident which results in:

i)immediate loss of any part of the body or any limb or part thereof

ii)crushed or serious injury to any part of the body due to which loss of the same is obvious or any injury which is likely to prove fatal.

iii)unconsciousness, or

iv)severe burns or scalds due to chemicals, steam or any other cause.

4)Wherever the person injured does not return to work in the factory before the expiry of 21 days after the occurrence of the accident with or without disablement and wherever the person injured returns to work in the factory after sustaining compassable disablement as a result of the accident, the Manager of the factory shall send to the Inspector within 28 days of the occurrence of the accident, a written report in the prescribed

Form 32 and follow it up a necessary with further reports in the same Form 32 once every fortnight thereafter, until the final report on the date of return to work of the person injured is made. In the event of the person injured not returning to work of his own accord or otherwise the full circumstances of the same should also be reported to the Inspector by the Manager of the factory within seven days of his name being removed from muster roll of the factory.

Schedule

1 a) Accidents which cause death to any person or are of a serious nature.

b)Accidents which cause such bodily injury as will prevent or will probably prevent the person injured from working for a period of 48 hours or more immediately following the accident.

2.The following classes of dangerous occurrences, whether or not they are attended by personal injury or disablement:

a)Bursting of a vessel used for containing steam under pressure greater than atmospheric pressure, other than plant which comes within the scope of the Indian Boilers Act.

b)Collapse of failure of a crane, derrick, winch, lift, hoist or other appliances used in raising or lowering persons or goods or any part thereof or the overturning of a crane.

c)Explosion, fire, bursting out, leakage or escape of any molten metal, hot liquor or gas causing bodily injury to the person or damage to any part or portion of the factory in which persons are employed or damage to any plant machinery or material.

d)Explosion of a receiver or container used in any process or for storage at a pressure greater than atmospheric pressure, of any gas or any gases (including air) or any liquid or any solid.

e)Collapse or subsidence of any floor, gallery, roof, bridge, tunnel, chimney, wall or building forming part of a factory or within the compound or cartilages of factory.

Rule 162. Notice of Poisoning or Disease:

A notice in Form 33 should be sent forthwith both to the Chief Inspector and to the Certifying Surgeon, by the manager of a factory in which there occurs a case of lead, phosphorous, mercury, manganese, arsenic, carbon bisulphide or benzene poisoning; or of poisoning by nitrous fumes or by halogen derivatives of the hydrocarbons of aliphatic series; or of chrome ulceration, anthrax, silicosis, toxic anaemia, toxic jaundice, primary epitheliomatous cancer of skin, or of pathological manifestations due to radium or other radio-active substances or x-rays.

Rule 163. Procedures in appeals:

1)An appeal presented under section 107 shall lie to the Chief Inspector or in cases where the order appealed against is an order passed by that officer to the State Govt. or to such authority as the State Government may appoint in this behalf and shall in the form of memorandum setting forth concisely the grounds of objection to the order and bearing court fees stamps in accordance with the Article 11 of Schedule II of the court Fees Act, 1870 and shall be accompanied by a copy of the order appealed against.

2)Appointment of Assessors: On receipt of the memorandum of appeal, the appellate authority shall, if it thinks fit or if the appellant has requested that the appeal should be heard with the aid of assessors, call upon the body declared under sub-rule (3) to be representative of the industry concerned, to appoint an assessor within a period of 14 days. If the assessor is nominated by such body, the appellate authority shall appoint a second assessor itself. It shall then fix a date for the hearing of the appeal and shall give due notice of such date to the appellant and to the inspector whose order is appealed against, and shall call upon the two assessors to appear upon such date to assist in the hearing of the appeal.

3)The appellant shall state in the memorandum presented under sub-rule(1) whether he is a member of one or more of the following bodies. The body empowered to appoint the assessor shall:-

a)if the appellant is a member of one such bodies, be that body;

b)if he is a member of two such bodies, be the body which the appellant desires should appoint such assessor; and

c)if the appellant is not a member of any of the aforesaid bodies or if he does not state in the memorandum which of such bodies he desires should appoint the assessor, be the body which the appellate authority considers as the best fitted to represent the industry concerned.

4)Remuneration of assessors:- An assessor appointed in accordance with provisions of sub-rules (2) and (3) shall receive for the hearing of the appeal, a fee to be fixed by the appellate authority, subject a maximum of fifty rupees per diem. He shall also receive the actual travelling expenses. The fees and travelling expenses. The fees and travelling expenses shall be paid to the assessor by Government; but where assessors have been appointed at the request of the appellant and the appeal has been decided wholly or partly against him, the appellate authority may direct that the fees and travelling expenses of the assessor shall be paid in whole or in part by the appellant.

Rule 164. Display of notices:

The abstract of the Act and of the Rules required to be displayed in every factory shall be in Form 34

Rule 165. Returns:

The manager of every factory shall furnish to the Inspector or other officer appointed by the State Government in this behalf, the following returns in the form and within the due dates specified below:-

a)annual return in

Form 35 in duplicate, on or before the 31st January of each year;

and

b)Deleted.

Rule 166. Service of notices:

The dispatch by post under registered cover of any notice or order shall be deemed sufficient service on the occupier, owner or manager of a factory of such notice or order.

Rule 167. Information required by the Inspector:

The occupier, owner, or manager of a factory shall furnish any information that an Inspector may require for the purpose of satisfying himself whether any provision of the Act and Rule have been complied with or whether any order of an Inspector has been duly carried out. Any demand by an Inspector for any such information, if made, during the courses of any inspection, shall be complied forthwith if the information is available in the factory, or if made in writing, shall be complied with, within seven days of receipt thereof.

Rule 168. Registers / records to be produced on demand to the Inspector.

The registers, records and notices maintained and exhibited under the provisions of these rules shall always be available at or as near as practicable to the site of employment and shall be produced or caused to be produced for inspection at all reasonable hours by any Inspector having jurisdiction over the factory.

Rule 169. Permissible levels of certain chemical substances in work environment:

Without prejudice to the requirements in any other provisions in the Act or the Rules, the requirements specified in this Schedule shall apply to all factories.

Schedule

1.Definition: For the purpose of this schedule-

a)"mg/m3" means milligrams of a substance per cubic meter of air.

b)"mppcm" means million particles of a substance per cubic meter of air.

c) "pmm" means parts of vapour or gas per million parts of air by volume at 250 C and 7600 mm of mercury pressure.

d)"Time Weighted Average Concentration" means the average concentration of a substance in the air at any work location in a factory computed from evaluation of adequate number of air samples taken at that location spread over the entire shift on any day, after giving weightage to the duration for

[1]Tenth Amendment vide No.F.7(121)-FB/AM(Vol.-II)/2007/2199 dtd., 27.01.2021.

which each such sample is collected and the concentration prevailing at the time of talking the sample.

Time Weighted Average Concentration: $= \frac{C_1T_1+C_2T_2+... +C_n T_n}{T_1+T_2+.....T_n}$

Where C1 represents the concentration of the substance for duration T1 hours; C2 represents the concentration of the substance for duration T2 hours; and Cn represents the concentration of the substance for duration Tn hours

e)"Work Location" means a location in a factory at which a worker works or may be required to work at any time during any shift on any day.

2.Limits of Concentrations of Substance at Work Locations:

1)The time weighted average concentration of any substance listed in Table 1 or 2 of the schedule, at any work location in a factory during any shift on

any day shall not exceed the limit of permissible time weighted average concentration specified in respect of that substance:

Provided that in the case of a substance mentioned in Table 1 in respect of which a limit in terms of short term maximum concentration is indicated, the concentration of such a substance may exceed the permissible limit of the time weighted average concentration for the substance for short periods not exceeding 15 minutes at a time, subject to the condition that-

a)such periods during which the concentration exceeds the prescribed time weighted average concentration are restricted to not more than 4 per shift.

b)the time interval between any two such periods of higher exposure shall not be less than 60 minutes; and

c)at no time the concentration of the substance in the air shall exceed the limit of short term maximum concentration.

2)In the case of any substance given in Table 3, the concentration of the substance at any work location in a factory at any time during any day shall not exceed the limit of exposure for that substance specified in the table.

3)In the cases where the word "skin" has been indicated against certain substance mentioned in Tables 1 and 3, appropriate measures shall be taken to prevent absorption through cutaneous routes particularly skin, mucous membranes, and eyes as the limits specified in these Tables are for conditions where the exposure is only thorough respiratory tract.

4) a) In case, the air at any work location contains a mixture of such substance mentioned in Table 1, 2, or 3, which have similar toxic properties, the time weighted concentration of each of these substances during the shift should be such, that when these time weighted concentration divided by the respective permissible time weighted average concentration specified in the above mentioned tables, and the fractions obtained are added together, the total shall not exceed unity.

i.e. $\frac{C_1}{}+\frac{C_2}{}+.....-\frac{C_n}{}$ Should not exceed unity $L_1\ L_2\ L_n$

When C1, C2 …… Cn are the time weighted concentration of toxic substances 1,2 …… and n respectively, determined after measurement of work location;

and L1, L2 …… Ln are the permissible time weighted average concentration of the toxic substances 1, 2, …… and in respectively.

b)In case the air at any work location contains a mixture of substances, mentioned in Table 1, 2, or 3, and those do not have similar toxic properties, then the time weighted concentration of each of these substances shall not exceed the permissible time weighted average concentration specified in the above mentioned tables, for that particular substance.

c)The requirement in clauses (a) and (b) shall be in addition to the requirements in paragraphs 2(1) and 2(2).

3.Sampling and evaluation procedures:-

1)Notwithstanding provisions in any other paragraphs, the sampling and evaluation procedures to the adopted for checking compliance with the

provisions in the schedule shall be as per standard procedures in vogue from time to time.

2)Notwithstanding the provisions in paragraph 5, the following conditions regarding the sampling and evaluation procedures relevant to checking compliance with the provisions in this schedule are specified.

a)For determination of the number of particles per cubic metre in item 1(a) i (1) in Table 2, samples are to be collected by standard or midget impinger and the counts made by light-field technique.

b)The percentage of quartz in the 3 formulate given in item 1 (a) i) of Table 2 is to be determined from air borne samples.

c)For determination of number of fibres as specified in item 2(a) of Table 2, the membrane filter method at 430 % magnification 14mm objectives with phase contrast illumination should be used.

d)Both for determination of concentration and percentage of quartz for use of the formula given in item 1(a) (i) (2) of Table 2, the fraction passing through a size-selector with the following characteristics should only be considered.

Aerodynamic diameter density sphere)	Percentage allowed (unit by size-selecter	
2.0	90	2.5
75		
3.5	50	
5.0	25	
10.0	0	

4.Power to require assessment of concentration of substances.-

1)An Inspector may, by an order in writing, direct the occupier or manager of a factory to get before any specified date, the assessment of the time weighted average concentration at any work location of any of the substances mentioned in Table 1, 2 or 3 carried out.

2)The results of such assessment as well as the method followed for air sampling and analysis for such assessment shall be sent to the Inspector with 3 days from the date of completion of such assessment and also a record of the same kept readily available for inspection by an Inspector.

5.Exemption:- If in respect of any factory or a part of a factory, the Chief Inspector is satisfied that, by virtue of the pattern or working time of the workers at different work locations or an account of other circumstances, no worker is exposed, in the air at the work locations, to a substance or substances specified in Tables 1, 2, or 3 to such an extent as is likely to be injurious to his health , he (the Chief Inspector) may by an order in writing, exempt the factory or a part of the factory from the requirements in paragraph 2, subject to such conditions, if any as he may specify therein.

Substance	Permissible limits of exposure		
	Time-weighted average Concentration		Short-term concentration
	ppm	Mg/m3	ppm
Acetic acid	10	25	15
Acrolein	0.1	0.25	0.3
Aldrin-skin	-	0.25	-
Ammonia	25	18	35

Aniline-skin	2	10	5
Anisidine (O-poisomers)-skin	0.1	0.5	-
Arsenic & Compounds (as As)	-	0.2	-
Benzene	10	30	-
Bromine	0.1	0.7	0.3
2 Butanene Methylothyl (ketone-MEK)	200	590	300
n-Butyl acetate	150	710	200
Sec/tert. Butyl acetate	200	950	250
Cadmium-dust and salts(as Cd)	-	0.05	-
Calcium oxide	-	2	-
Carbaryl (Sovin)	-	5	-
Carbofuran (Furadan)	-	0.1	-
Carbon disulfide-skin	2	60	30
Carbon monoxide	50	55	400
Carbon tetrachloride-skin	10	65	20
Carbonyl chloride (phosgene)	0.1	0.4	-
Chlordane-skin	-	0.5	-
Chlorobenzene (mono chlorobenzene)	75	350	-
Chlorine	1	3	3
bis-Chloromethyl either	0.001	-	-
Chromic acid and	-	0.05	-
Chromium, Sel-chramic Chromous salts (as Cr)	-	0.5	-
Copper fume	-	0.2	-
Cotton dust, raw	-	0.2	-
Cresol, all isomers-skin	5	22	-
Cyanides, as CN) skin	-	5	-
Cyanegen	10	20	-
DDT (Dichlorodiphenyl	-	1	-
Demeton-skin	0.01	0.1	0.03

Mg/m3
37
0.8
0.75
27
20
-
-
-
2

				885
				950
				1190
				0.2
				-
				10
				-
				90
				440
				130
				-
				2
				-
				9
				-
				-
				-
				-
				0.6
				-
				-
				-
				-
				0.3
Diazion-skin	-	0.1	-	0.3
Dibutyl phthalate	-	5	-	10
Dichlorves(DDVP) -skin	0.1	1	0.3	3
Dieldrin-skin	-	0.25	-	0.75
Dinitrobenzene(all isomers)-skin	0.15	1	0.5	3
Dinitrotoluene-skin	-	1.5	-	5
Diphenyl	0.2	1.5	0.6	4
Endosulfan (Thiodan)-skin	-	0.1	-	0.3
Endrin-skin	-	0.1	-	0.3
Ethyl acetate	400	1000	-	-
Ethyl alcohol	1000	1900	-	-
Ethyl amine	10	18	-	-
Flourides (as F)	-	2.5	-	-
Flourine	1	2	2	4
Hydrogen Cyanide-skin	10	11	15	16
Hydrogen sulfide	10	15	15	27
Iron oxide fume (Fe203 as Fe)	-	5	-	10
Iscamyl acetate	100	525	125	655
Isoamyl alcohol	100	525	125	655
Isobutyloalcohol	50	150	75	225

Lead, inorg, fumes and dusts (as Pb)	-	0.15	-	-
Lindane-skin	-	0.5	-	1.5
Mala thien-skin	-	10	-	-
Manganese fume (as Mo)	-	1	-	3
Mercury (as Hg)	-	0.00	-	0.15
Mercury (alkyl compounds)-skin (as Hg)	0.001	0.01	0.003	0.03
Methyl alcohol (methanol)-skin	200	260	250	310
Methyl cellosolve-skin (2-methoxy ethanol)	25	80	35	120
Methyl isobutyl ketone-skin	100	410	125	510
Napthalene	10	50	15	175
Nickel carbonyl (as Ni)	0.05	0.35	-	-
Nitric acid	2	5	4	10
Nitric oxide	25	30	35	45
Nitrobenzene-skin	1	5	2	10
Oil mist-mineral	-	5	-	10
Parathion-skin	-	0.1	-	0.3
Phenel-skin	5	19	10	30
Phorate (Thimet)-skin	-	0.05	-	0.2
Phosgene (Carbonyl chloride)	0.1	0.4	-	-
Phosphine	0.3	0.4	1	1
Phosphorous (yellow)	-	0.1	-	0.3
Phosphorous pentachloride	-	1	-	3
Phosphorous trichloride	0.5	3	-	-
Picric acid-skin	-	0.1	-	0.3
Pyridine	5	15	10	30
Silane (Silicon tetrahydride)	0.5	0.7	1	1.5
Styrene, Menemer (phenylethylene)	100	420	125	525
Sulfur dioxide	5	13	-	-
Sulfuric acid	-	1	-	-
Toluene (teluel)-skin	100	375	150	560
o-Toludine	5	22	10	44
Trichloroethylene	100	535	150	800
Vinyl chloride	5	10	-	-
Welding fumes (Noc)	-	5	-	-
Xylene (o-m--p-isomers)-skin	100	435	150	655

TABLE 2

Substance Permissible time weighted average Concentration

1.Silica

(a)Crystallin

e i) Quartz

$$1) \text{ In terms of dust count : } \frac{1060}{\% \text{ Quartz} + 10} \text{ mpp cm}$$

2) In terms of respirable : ---------- mg/m3
dust % respirable quartz +2

3) In terms of total dust : ---------- mg/m3
% quartz + 3

ii) Cristobalite Half the limits given against quartz

iii) Tridymite Half the limits given against quartz

iv) Silica fused Same limit as for quartz

v) Tripoli Same limit as in formula in item 2 given against quartz b)

Amorphous 705 mpp cm

2. Silicate having less than 1% free silica by weight

a) Asbestos (fibres longer than 5 microne) 2 fibres/cubic centimeter b)

Mica 705 mppcm

c) Mineral wool fibre 10mg/m3

d) Porlite 1060 mppcm

e) Portland cement 1060 mppcm

f) Soap stone 705 mppcm

g) Talc (monobostiform) 705 mppcm

h) Talc (fibrous) same limit as for asbestos

i) Tromolite same limit as for asbestos

3. Coal dust

1)For airborne dust having less than 5% silicon dioxide by weight : 2 mg/m3

2)For airborne dust having over 5% silicon dioxide : Same limit as prescribed by formula in item (2) against quartz.

TABLE 3

Substance	Permissible limit of exposure	
	ppm	mg/m3
Acetic anhydride	5	20
O-Dichlorobenzene	50	300
Formaldehyde	2	3
Hydrogen Chloride	5	7
Manganese & Compounds (As Mn)	-	5
Nitrogen dioxide	5	9
Nitroglycerin-skin	0.2	2
Potassium hydroxide	-	2
Sodium hydroxide	-	2
2,4,6 - Trinitrotoluene (TNT)	-	0.5

Rule 170 Deleted.

Rule 171. Register of Accidents and Dangerous Occurrences:

The manager of every factory shall maintain a register of all accidents and dangerous

occurrences which occur in the factory in

Form 38.

Rule-172. Maintenance of Inspection Book:

The manager of every factory shall maintain a bound inspection book and shall produce it when so required by the
Inspection or Certifying Surgeon.

Rule-173. Information regarding closure of factories:

(1) The occupier and the manager shall be jointly or severally responsible for sending information in duplicate to the Inspector, of any intended closure to the factory or any shift, section or department thereof, immediately after it is decided to do so, and before the closure takes place, stating-

a)the reasons for closure;

b)the reasons for closure;

c)the number of workers on the muster-roll of the factory ofn the day the information is sent;

d)the number of workers likely to be affected by the closure;

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[1]Tenth Amendment vide No.F.7(121)-FB/AM(Vol.-II)/2007/2199 dtd., 27.01.2021.

e) the probable period of closure;

Provided further that it shall not be necessary for the occupier or manager to send information of intended closure if the closure is rendered inevitable on account of fire, breakdown of machinery, stoppage of power or water supply or any other cause beyond his control.

2)The Occupier and the Manager shall be jointly or severally responsible for sending also information in duplicate to the Inspector as soon as the factory or any shift, section or department thereof, is actually closed in the

Form 39.

3)The Occupier and the Manager shall be jointly or severally responsible for sending also information in duplicate to the Inspector as soon as the factory or any shift, section or department thereof, is reopened in

Form 40.

Explanation 1: For the purpose of this rule, "closure" means the closing the factory, or any shift, section or department thereof or the total or partial suspension of work (other than work of a temporary nature) by the occupier or manager of the factory, or total or partial refusal by the occupier or manager of the factory to continue to employ persons employed by him where such refusal does not amount to the discharge, dismissal or suspension of worker or workers by way of punishment.

Explanation 2: This rule shall not apply in the case of any section or department of a factory if such closure does not affect the total number of workers employed in the factory.

Rule 174. Power to Cancel the Licence and Registration upon receipt of report:

The Chief Inspector may, on receipt of a report in respect of any factory under sub-rule (1) of 173, and after making such enquiry as he thinks fit, by order, cancel the licence and registration in respect of such factory with effect from such date as may be specified in this order.

Rule 175. Preservation of Records

The records specified in column 1 of the table below shall be preserved in the office of the Chief Inspector for the periods specified in the corresponding entries in column 2 thereof:-

Records	Period of Retention
Applications presented under Rule7 to 9 of the Tripura Factories Rules 2007	Five Yrs from the date of disposals of the applications
Counterfoils and licences issued under the said Rules.	Five Yrs form the date of issue of licences.
Challans	Five yrs from the date of issue of Licences.

Rule 176. Manner of Destruction for Records

After the period of retention specified in rule 180, the record shall be destroyed either by tearing or burning in the presence of the head of the office.

Rule 177. Language in the Registers and records

The registers and records required to be maintained in the factory under the provisions of the Act and these rules shall be either in English or in a Bengali.

Rule 178. Exhibition of Name Board

The name board of a factory shall be displayed conspicuously at the entrance of the factory premises. The name board shall be in English or Bengali.

Rule 179. Power of Exemption

The State Government may, be notification in the official Gazette, exempt subject to other to such conditions as it may be consider necessary, any workshop or workspace where a manufacturing process carried on and which is attached to a public institution maintaining for the process of education, training or reformation, from all or any provisions of those rules.

Rule-179A(1) Additional wages for works during holidays

Where a worker is required to work in a factory on a paid holiday, he shall, if the total period of working hours in the respective week does not exceed forty eight hours be entitled to additional wages for that holiday at the following rates :-

(i)Two – times the normal daily wages for eight hours of work.

(ii)For works less than eight hours the wages shall be one eighth of two times of normal daily wages for every hours or part of an hour of work.

(2) Notwithstanding anything contained in these rules the State Government may by order to be published in the official gazette direct that the provisions of sub-rule (I) shall apply to any factory in respect of any past period.

Explanation – For the purpose of this rule "paid holiday"

(i)In relation to a factory of the Government means a day declared by the Government as closed.

(ii)In relation to a factory under the private sector or the Government undertaking means a day declared as closed by the management of such factory but does not include weekly holiday.[1]

Rule 180. Repeal and saving

On the commencement of these rules, the Tripura Factories Rules, 1952, shall stand repealed. Notwithstanding such repeal, anything done or any action taken under the said Rule shall be deemed to have been done or taken under the corresponding provisions of this Rules.

1 First Amendment vide No.F.7(121)-FB/AM/2007/225 dtd., 22.04.2008

FORM 1

(APPLICATION FOR GRANT OF CERTIFICATE OF COMPETENCE TO A PERSON)

1.Name

2.Father's Name

3.Date of Birth

4.Address

i)Permanent

ii)Present

5.Name & Address of the Organization :-

6.Designation :-

7.Education Qualification (Copies of testimonials to be attested)

8.Details of professional experience (in chronological order)

Name of the Organization	Period of service	Designation	Area of Responsibility
1	2	3	4

9.Membership, if any, of the professional bodies.

10.(i) Details of facilities (examination, testing etc.) at his disposal.

(ii) Arrangements for calibrating and maintaining the accuracy of those facilities.

11.Purpose for which competency certificate is sought (Section or Sections of the Act should be stated).

12.Whether the applicant has been declared as a competent person under any statute (If so the details).

13.Any other relevant information

Declaration by the applicant.

I, …….. hereby declare that the information furnished above is true. I undertake

a)that in the event of any change in the facilities at my disposal (either addition or deletion) or my leaving the aforesaid organization, I will promptly inform the chief Inspector of Factories

b)to maintain the facilities in good working order, calibrated periodically as per manufacturers instructions or as per National Standards; and

c)to fulfill and abide by all the conditions stipulated in the certification of competency and instructions issued by the Chief Inspector of Factories from time to time

Place ……

Date ……. Signature of the applicant

Declaration by the Institution (if employ*********)

I, …….. . certify that Shri …….is in our employment and we nominate him on behalf of the organization for the purpose of being

declared as a **competent person** under the Act. I also under take that I will --

a)notify the Chief Inspector in case the competent person leaves our employment;

b)provide and maintain in good order all facilities at his disposal as mentioned above.

c)notify the Chief Inspector of Factories any change in the facilities (either addition or deletion).

Dated : ……

Signature
Designation
Telephone No .

Official Seal

Form 2

[See rule 3(3)]

(APPLICATION FOR GRANT OF CERTIFICATE OF COMPETENCE TO AN ORGANISATION)

1).Name and full Address of the organization

2).Organization's Status (specify whether Government, autonomous, Co-Operative 3). Purpose for which Competency Certificate is sought (specify Section(s) of the Act)

4).Whether the organization has been declared as a competent person under this or any other statute. If so give details.

5).Particulars of persons employed and possessing qualification and experience as set out in schedule annexed

Sl. No.	Name and Designation	Qualifications.	Experience	Section(s) and the rules under which competency is
1	2	3	4	5

6).Details of facilities (relevant to item 3 above) and arrangements made for their maintenance and periodic calibration.

7).Any other relevant information. 8). Declaration :

I, ……. hereby on behalf of ..... certify that the details furnished above are correct to the best of my knowledge. I undertake to –

(i)maintain the facilities in good working order, calibrated periodically as per manufacturers instructions or as per National Standard; and

(j)to fulfil and abide by all the conditions stipulated in the certificate of competency and instructions issued by the Chief Inspector of Factories from time to time.

Signature of head of the Institution or of the persons authorized to sign on his behalf.

Designation

Place & Date :

Form 3

See rule 3(3)

CERTIFICATE OF COMPETENCY ISSUED TO PERSON OR AN INSTITUTION IN PURSUANCE TO

SECTION 2(CA) OF THE FACTORIES ACT AND RULES MADE THERE UNDER

I, ……, in exercise of the powers conferred on me under Section 2(ca) of the Factories Act, 1948 and rules made there under, hereby recognize ……..(Name of the Institution) or Shri ……...(Name of the Person) employed in ……..……... (Name of the Organization) to be a **competent person** for the purpose of carrying out tests, examinations, inspections and certification for such buildings, dangerous machinery, lifts and hoists, lifting machines and lifting tackles, pressure plants, confined space, ventilation system and process or plant and equipment as the case may be, used in the factory located in ……. under section ……..and the rules made there under.

…… …

Strike out the words not applicable.

This certificate is valid from …… to …….

This certificate is issued subject to the conditions stipulated hereunder:

i)Test Examination and inspections shall be carried out in accordance with the provisions of the Act and the rules made there under;

j)Test examination and inspections shall be carried out under direct supervision of the competent person or by a person so authorized by an Institute recognized to be a competent person.

k)The certificate of competency issued in favour of a person shall stand cancelled if the person leaves the organization mentioned in his application; l)The Institution recognized as a competent person shall keep the Chief Inspector of Factories informed of the names, designations and qualifications of the person authorized by it to carry out test, examination and inspection.

Station

Official Seal

Signature of the Chief Inspector of Factories

Note :- A separated certification should be issued under each relevant Section . A person or an institution may be recognized competent for the purpose of more than one section of the Act.

Form 4

(See rules 6)

CERTIFICATE OF STABILITY

1.Name of the factory
2.Full Postal address of the factory
3.Name of the Occupier
4.Nature of the manufacturing process to be carried on the factory
5.Number of the floors on which workers will employed

I certify that I have inspected the premises, the plants of which have been approved by the Chief Inspector of Factories in his letter no ..... date d …….and examined the various parts including the foundations with special reference to the machinery, plant, etc that have been installed. I am of the opinion that all the works of Engineering construction in the premises is/are structurally sound and that its/their stability will not be endangered by its/their use as a factory/part of a factory for the manufacture of …….. or for which the machinery, plant etc., installed are intended.

Signature
Qualificatio
n Address
Date

(If employed by a company or Association, name and address of the company or Association).

Form 5

(See rules 5(2))

APPLICATION FOR PERMISSION TO CONSTRUCT, EXTEND OR TAKE INTO USE ANY BUILDING

AS A FACTORY

1)Applicant's name
2)Applicant's profession
3)Applicant's Address
4)Name of the Factory
5)Full Postal address of the factory
6)Situation of the factory
    a)Town / Village
    b)Subdivision
    c)District
    d)Nearest police station
7)Particulars of the plant to be installed :-
8)Particulars for which Plan-drawing are submitted :-
(State whether initial approval/additional installation / additional construction /changes in installation etc)
9)If the plans have been approved earlier give the number and date of approval of previous plans relevant to the present plans except in the case of initial approval.
10)Total installed capacity in Horse Power.
11)Maximum number of workers proposed to be employed in the factory.

Signature of the applicant with date & Seal

Note: This application should be accompanied by the following documents:-

(a)A flow-chart of the manufacturing process supplemented by a brief description of the process in its various stages, list of raw materials used, intermediate products including emission of toxic gases, etc., finished products, by-products, their quantities, methods of storage and handling, loading and transport and details of the arrangements for the disposal of trade waste and effluents, the likely hazards and the methods to control or eliminate them.

(b)Plans, in duplicate, drawn to scale, showing –

(i) the site of the factory and immediate surroundings including adjacent buildings and other structures, roads, drains etc., and

(ii) the plan, elevation and necessary cross-sections of various buildings including all relevant details, relating to natural lighting, ventilation and means of escapes in case of fire. The plans shall also clearly indicate the position of the plant and machinery, aisles and passages; and

(iii) such other particulars as the Chief Inspector may require.

Form 6

(See rules 7)

APPLICATION FOR REGISTRATION AND GRANT OR RENEWAL OF FACTORY LICENCE AND NOTICE OF OCCUPATION (FOR THE YEAR... .....)

(to be submitted in triplicate)

1)Name of the Factory

2)Factory Licence number, if already registered

3)Full Postal address of the factory

4)Postal Address to which communication relating to the factory should be sent 5)Names of items manufactured / to be manufactured (principal product & other product)

a)in the factory in the last twelve months (in case of factories already in existence); and

b)in the factory during next twelve months (in case of all factories)

6)a) Maximum number of workers proposed to be employed on any one day during the year.

b) Numbers of workers to be ordinarily employed in the factory.

7)Nature and amount of power to be used (in KW or H.P)

i)Installed or

ii)Proposed to be installed

8)Full Name and residential address of the person who shall be the Manager of the factory for the purpose of the Act & Rules.

9)Full name and residential address of the Occupier -

a)the proprietor of the factory in case of a private firm of proprietary concern.

b)the partners in case of partnership firm.

c)the Directors in case of public limited company or firm.

d). the Directors in case of private limited company or firm. e). the Shareholders in case of a private company

f). the Chief Administrative Head in case of Government factory or a factory run by local authority or by any statutory corporation or by body.

g) president / secretary and other shareholders in case of Co-op. society.

10).Full name and Address of the owner of the premises or building including the precincts thereof referred to in Section 93.

11).a) Reference number and date of approval of the plans for site whether for old or new building or for construction or extension of factory by the Chief Inspector; and

b). Reference number and date of approval of the arrangements, if any, made for disposal of trade wastes and effluents and the name of authority granting such approval.

12).a). Amount of fee paid : Rs. …….

b).Challan Number & date of payment in Treasury (Original copy of Challan to be enclosed)

Signature of Manager — Signature of Occupier

Date — Date

Note :-

1).This form should be completed in Ink in Block letters or typed.

2).If any of the persons named against item no.9 is minor, the fact should be clearly stated.

Form 7

(Prescribed under Rule – 8,9,11)

GOVERNMENT OF TRIPURA FACTORIES & BOILERS ORGANIZATION

LICENCE TO WORK A FACTORY

Registration No. …….. Date of Reg. ……

Licence is hereby granted to
for the premises known as
situated at
for use as a factory within the limits stated hereinafter, subject to provisions of the Factories Act, 1948, and the rules made there under.

The ……20…. **Chief Inspector of Factories**

(Issuing authority)

	Calendar Year	Valid For		Fee	Date of Payment	Excess fee for late payment	Date of payment	Signature of the Issuing Authority
		Maximum number of workers on any one day	Maximum Installed Power / Capacity in KW or HP or					
Granted Under Rule 7								
Renewed Under Rule9								

TRANSFERS

To whom transferred	Year of transfer	Date of payment of Transfer fee	Signature of the Issuing Authority

AMENDMENTS

Year when Amended	Amended		Date of payment of amendment fee	Additional fee	Date of Payment	Signature of the Issuing Authority
	Workers	Installed Power Capacity in Kilowatts				

Form 8

(See Rule 19)

NOTICE OF CHANGE OF

MANAGER 1)Full Name of the Factory

2)License No

3)Full Postal Address

4)Name of Outgoing Manager

5)a) Full name of New Manager

b)Age

c)Details of immediate previous Employment (State name of the Employer , Place of Work, period of employment, nature of work)

d)Permanents Address with Telephone no, if installed

e)Present address with Telephone no, if installed.

f)Date of Appointment of the New Manager

Specimen Signature of the New Manager Date

Place Signature of the Occupier

Form 10

[See rule 25(2)]

CERTIFICATE OF FITNESS

1 (a) Serial no (b) date 2.Name of the Person examined 3.Father's Name 4.Sex 5.Residence 6.Date of Birth 7.Physical fitness 8.Descriptive marks 9.Reason for a)refusal of Certificate b)Certificate being Signature or left hand thumb impression of the person examined Initials of Certifying Surgeon	Serial No Date I Certify that I have personally examined Sri/Smt ……... Son/daughter of …… residing at …… …… …… …… …… who is desirous of being employed in a factory, and that his /her age, as nearly as can be ascertained from my examination is ..... yrs, and that he/she is fit for employment in factory as an adult/child. His/Her descriptive marks are …….. …… …… …… …… Signature or left hand thumb impression of the person examined Signature of Certifying surgeon

Form 12

(See rule 67, 68)

REGISTER OF WORKERS EMPLOYED FOR WORK ON OR NEAR MACHINERY IN MOTION

1).Name of worker

2).Serial no as in the register of workers under section

62 3). Father's Name

4). Date of

Birth 5).

Department

6).Nature of work

7).Qualification or period of service on similar work

8).Date when tight fitting clothing was provided

9).Remarks

I certify that above mentioned worker whose signature or left thumb impression is given below is a properly trained male adult worker who is competent to mount or slip belts, lubricate and other adjusting operations on the machinery installed in my factory while they are in motion.

Signature of left hand thumb impression of worker

Signature of Occupier / Manager

Form 13

(See Rule 72)

REPORT OF EXAMINATION OF HOISTS AND LIFTS

1.Name of Occupier with Address

2.Name of Manager

3.(a)Type of hoist or lift identification number or description
(b)Date of Construction or re- construction (if ascertainable)

4.Are all parts of the hoist or lift of good mechanical construction, sound material and adequate strength (so far as ascertainable).

5.Are the following parts of the hoists or lift properly maintained and in good working order ? If not, state what defects have been found.

(a)Enclosure of hoist-way or lift-way
(b)Landing gates and cage gates
(c)Interlocks and the landing gates and cage gate(s)
(d)Other gate fastenings
(e)Cage and platform and fittings, guides, buffers, interior of the hoist way or life– way.
(f)Overrunning devices
(g)Suspension ropes or chain and their attachments
(h)Safety gears i.e., arrangements for preventing fall of platform or cage breaks
(i)Brakes
(j)Worm or Spur gearing
(k)Other electrical equipment
(l)Other parts

4).What parts (if any) where inaccessible?

5).Repairs, renewals or alternation (if any) required and period within which they should be executed.

6).Maximum safe working load subject to repairs, renewals or alterations (If any) specified in item (5).

7).Other particulars

I/we certify that on (date) ..... I/We thoroughly examined this hoist or lift and that the above is a correct report of result.

Signature
Qualification
Address
Date

(If employed by a company or association, name and address of the company or association).

Form 15

[See Rule 74(9) (b)]

REPORT OF EXAMINATION OR TEST OF PRESSURE VESSELS OR PLANT

1.Name and address of factory :-

2.Name, description and distinctive number of Pressure Vessel or Plant :-

3.Name and address of manufacturer and reference to their test certificate or certificate of competent person

4.Nature of process in which pressure vessel or plant is used

5.Particulars of Pressure Vessel or Plant

a). Date of Construction

b).Thickness of walls

c).Date on which the pressure vessel or plant was first taken into use

d).Maximum possible working pressure recommended by the manufacturer

e). Safe working pressure recommended by the manufacturer

7).Date of last –

(i)external examination

(ii)internal examination

(iii)hydraulic examination

(iv)ultrasonic test

8).Whether lagging was removed for purposes of examination 9). What parts (if any) were inaccessible?

10)Description of examination carried out and findings—

(i)External examination (give reasons if it is not carried out six monthly)

(ii)Internal examination (give reasons if it is not carried out annually)

(iii)Hydraulic test (give reasons if it is not carried out at interval of 2 years or 4 years)

(iv)Ultrasonic test (please quote number and date of the certificate issued by Chief Inspector, permitting ultrasonic test in lieu of internal examination and hydraulic test).

11)Safe working pressure calculated as per methods given in sub-rule 5©(ii) for sizing cylinders -

12).Condition of pressure vessel or Plant –

(a)Vessel

(b)Piping

13).Condition of fittings and appliances

(i)Pressure Gauges

(ii)Safety Valve

(iii)Stop Valve

(iv)Reducing valve (give reasons if not necessary)

(v)Additional safety valve (required in case reducing valve is necessary)

(vi)Other devices (please specify particularly in case of jacketed vessels).

14)Safe working pressure recommended by after examination

15)Specify repairs, if any, and periods within which they should be executed.

16)Specify reduced working pressure pending repairs.

17. Other observations / conditions subject to which the plant is to be operated

I certify that on (date) ..... the pressure vessel or plant described above was thoroughly cleaned and (sor far as its construction permits) made accessible for through examination and for such tests as were necessary for the rough examination and that on the

said date, I thoroughly examined this pressure vessel or plant, including its fittings, and that the above is a true report of my examination.

Signature :-
Qualification :-
Address :-
Date :-
(If employed by a company or association, name and address of the company or association).

Fo
rm 16

(See
Rule
75(8)(b))

REGISTER OF EXAMINATION OF GASHOLDERS

Distinguishing number or letter of gas holder	Particulars of Manufacture					Particulars of examination carried out under sub-rules 75(4) and (5)			Particulars of repair			Remarks
	Maker's Name	Date of Manufacture	Number of lifts	Maximum Capacity in cubic meters	Pressure thrown by gas holder when full of gas	Method of examination used	Date of examination	Name and designation of the person making this examina	Nature of repairs	Date of repairs and painting	By when repairs are carried out	
1	2	3	4	5	6	7	8	9	10	11	12	13

Signature of the occupier

/Manager

Form 17

[See Rule 75(8)(c)]

REPORT OF EXAMINATION OF WATER-SEALED GAS HOLDER

1. Name of occupier and factory :
2. Situation and address of factory :
3. Name, description, distinguishing number or letter and type of gas holder.
4. Name and address of the manufacturer
5. (a) Number of lifts
   (b) Maximum capacity in cubic meters.
   (c) Pressure thrown by holder when full of gas
6. Particulars of gas to be stored in the holder
7. Particulars as to the condition of
   (A) Crown
   (B) Side shooting, including grips and cups
   (C) Guiding Mechanism (Roller carriages, rollers, pins, guide rails or ropes) (D) Tank and
   (E) Other structure, if any (columns, framing and bracing)
8. Particulars as to the position of the lifts at the time of examination
9. Particulars as to whether the tank and lifts were found sufficiently level for safe working and if not, as to the steps taken to remedy the defect
10. Date of examination and by whom it was carried out
11) Condition of Vessel
a) External
b) Internal
12) a) Are all fitting and appliances properly maintained and in good condition ?
   b) Repairs if any, required and period within which they should be executed
   (c) Any other condition which the person making the examination thinks it necessary for securing safe working
13) Other observations

I certify that on (date) ..... the gasholder described above was thoroughly examined and such of the tests as were necessary made on the same day and that the above is a true report of any examination

Signature :

Qualification

Address

Date

(If employed by company or association,
name and address of the association)

Form 18

(See rule 96)

RECORD OF EYE EXAMINATION

Serial Number	Department/ works	Name of the worker	Sex	Age (on last birthday)	Occupation		Examination of eyesight		Signature of ophthalmologist	Remarks
					Nature	Date of employment	Date	Result		
1	2	3	4	5	6	7	8	9	10	11

Form 18A

(Prescribed under rule –99)

FORMAT OF APPLICATION TO THE SITE APPRAISAL COMMITTEE

1.Name and address of the applicant

2.Site Ownership Data

Revenue details of site such as Server No.

Plot No. etc

Whether the site is classified as forest and of so, whether approval of the Central Government under section 5 of the Indian Forests Act, 1927 has been taken.

whether the proposed site attracts the provisions of section 3(2) (v) of the E.P Act, 1986. If so , the nature of the restrictions.

Local authority under whose jurisdiction the site is located.

3.Site Plan

Site plane with clear identification of boundaries and total area proposed to be occupied and showing the following details nearby the proposed site.

a)Historical monument, if any, in vicinity.

b)Name of neighboring manufacturing units and human habitats educational and training institutions, petrol installations, storage of LPG and other hazardous substance in the vicinity and their distance from the proposed unit.

c)Water sources (river streams, canals, dams, water filtration plants, etc.) in the vicinity.

d)Nearest Hospitals, Fire-station, civil defence station and police stations and their distances.

e)High tension electrical transmission lines, pipe line for water, oil, gas or sewerage; railway lines, Roads, stations, jetties and other similar installations.

3.2 Details of soil conditions and depth at which hard strata obtained.

3.3 Contour map of the area showing nearby hillocks and difference in levels. 3.4 Plot plan of the factory showing the entry and the exit points, roads within, water drains etc.

4.Project Report

4.1 A summery of the salient features of the project.

4.2 Status of the organization (Govt., Semi-Govt, Public or Private etc.)

4.3 Maximum number of persons likely to be working on the factory.

4.4 Maximum amount of power and water requirements and source of their supply.

4.5 Block diagram of the buildings and installations for the proposed supply. 4.6 Details of housing colony, hospital, school and other structural facilities proposed.

5.Organisation structure of the proposed manufacturing unit/factory

5.1Organisation diagrams of

-Proposed enterprise in general.

-Health, Safety and Environment protection departments and their linkage to operation and technical departments.

5.2 Proposed Health and Safety policy.

5.3 Area allocation for treatment of Wastes and Effluent.

5.4 Percentage outlay on safety, health and environment protection measures.

6.Meteorological data relating to the site.

6.1 Average, minimum and maximum of

-Temperature

-Humidity

-Wind velocities, during the previous ten years.

6.2 Seasonal variations of wind direction

6.3 Highest water level reached during the floods in the area recorded so far. 6.4 Lightening and seismic data of the area.

7.Communication links

7.1 Availability of telephone/ telex/ wireless and other communication facilities for outside communication.

8.Manufacturing Process Information 8.1

Process flow diagram

8.2 Brief write-up on process and technology.

8.3 Critical process parameters such as pressure build-up, temperature rise and run-away reactions.

8.4 Other external effects critical to the process having safety implications, such as ingress of moisture or water.

8.5 Highlights of the build-in safety/ pollution control devices or measures/ incorporated in the manufacturing technology.

9.Information of Hazardous Materials

9.1 Raw materials, intermediates, products and by-products and their quantities. Enclose Material Safety Data Sheet (MSDS) in respect of each hazardous substance.

9.2 Main and intermediate storages proposed for raw materials/ intermediates/ products/ by-products (maximum quantities to be stored at any time).

9.3 Transportation methods to be used for materials inflow and outflow, their quantities and likely routes to be followed.

9.4 Safety measures proposed for:

-handling of materials.

-internal and external transportation; and

-disposal (packing & forwarding of finished products)

10.Information on Dispersal/ Disposal of Wastes and pollutants

10.1 Major pollutants (gas, liquid, solid) their characteristics and quantities (average and at peak loads)

10.2 Quality and quantity of solid pollution problems anticipated and the proposed measures to control the same, including treatment and disposal of effluent.

11.Process Hazards Information

11.1 Enclose a copy of the report on environmental impact assessment.

11.2 Enclose a copy of the report on Risk Assessment study.

11.3 Published (open or classified) reports, if any, on accident situations/ occupational health hazards or similar plants elsewhere (within or outside the country).

12.Information of proposed Safety and Occupational Health Measures

12.1 Details of fire fighting facilities and minimum quantity of water, CO_2 and or other fire fighting measures needed to meet the emergencies.

12.2 Details of in-house medical facilities proposed

13.Information on Emergency Preparedness

13.1 On site emergency plan

13.4 Proposed arrangements, if any, for mutual aid scheme with the group of neighboring factories.

14.Any other relevant information

I certify that the information furnished above is correct to best of my knowledge and nothing of importance has been concealed while furnishing it.

Name and signature of applicant

FORM 19

[See rule 136 (4) (a)]

REGISTER OF COMPENSATORY HOLIDAYS

Sl. No.	Number in the register of workers	Name	Group or relay number	Number and date of exempting order	Year	Weekly rest days lost due to the exempting order in				Date of compensatory holiday given in				Lost rest days carrie to the next year
						January to March	April to June	July to September	October to Decemb	January to March	April to June	July to Septemb er	October to Decemb	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Signature of Manager of the factory

FORM 20

(See Rule 137)

OVERTIME MUSTER ROLL FOR EXEMPTED WORKERS

Month ending …….20……

Number in the register of adult workers	Name of exempted worker	Department	Dates on which overtime has been worked	Extent of overtime on each occasion	Total overtime hours worked or production in case of piece	Normal hours	Normal rate of pay for piece work or rate or pay per	Over time rate of pay	Normal earnings	Overtime earning earnings	Total earnings	Date on which overtime payments made.
1	2	3	4	5	6	7	8	9	10	11	12	13

FORM 21

(Prescribed
under Rule 140)

NOTICE OF PERIODS OF WORK FOR ADULT

Name of factory …….. Place .....

District---------- ……

Periods of works group	Men													Women										Description of groups		Remar
	Total number of men employed													Total number of Women employed												
Relays	A			B			C			D				A			B			C			D			Group letter	Nature of work	
	1	2	3	1	2	3	1	2	3	1		3		1	2		1	2	3	1	2	3	1	2	3			
On Working																												
From – To –																												
From – To –																												
From – To																												
On partial working days																												
From – To -																												
From – To -																												

Date on which this notice is first exhibited:

……

(Signature of Manager)

FORM 22

(Prescribed under Rule 141) REGISTER

OF

ADULT WORKERS

Serial Number	Name	Residential address	Father's Name	Nature of work	Letter of group as in Form_21	Number of relay if working in shifts	Number and date of certificate if an adolescent		Remarks
							Number of Certificate and date	Token Number giving referen	
1	2	3	4	5	6	7	8	9	10

(Signature of Manager)

FORM 23

(see Rule 146)

NOTICE OF PERIODS OF WORK FOR CHILD WORKERS

Name of Factory Place District_____

Period of Work	Children								
	Total number of Children employed						Description of group		Remarks
Groups	A		B		C		Group Letter	Nature of work	
Relays	1	2	1	2	1	2			
From To									

Date on which this notice is first exhibited

Signature of Manager

Date: -

FORM 24

(see Rule 147)

REGISTER OF CHILD WORKERS

Serial No.	Name	Residential Address	Father's Name	Date of first employment	Number of certificate and its date	Token number giving reference to certificate	Letter of group as in Form	Number of relay, if working in shifts	Remarks
1	2	3	4	5	6	7	8	9	10

Signature of Manager

Date: -

FORM 25

(see Rule 148)

REGISTER OF LEAVE WITH WAGES

Part I - Adults

Part II - Children

Factory :- Name of Worker : -

Department:- Father's Name : -

Sl. No.	Serial Number in the register of adult/ child workers	Date of entry into service	Interruptions					Leave due with effect from	Whether leave not desired during the next 12 months	Date from which the worker is allowed leave	Wages for leave paid in	Discharged worker	
			Sickness and accident	Authori-sed leave	Lockout or legal strike	Involuntary unemployment	Others					Date of discharge	Date and amount of payment made in lieu of
1	2	3	4	5	6	7	8	9	10	11	12	13	14

Note :- Separate page shall be allotted to each worker.

_____

(Signature of Manager)

FORM 26

(See Rule 149)

Leave book

Factory: -

Department: -

Name of Worker: -

Father's Name: -

Sl. No.	Serial Number in the register of adult/ child workers	Date of entry into service	Interruptions					Leave due with effect from	Whether leave not desired during the nest 12 months	Date from which the worker is allowed leave	Wages for leave paid in	Discharged worker	
			Sickness and accident	Authori - sed leave	Locko ut or legal strike	Involunt- ary unemp- loyment	Others					Date of discharge	Date and amount of payment made in lieu of
1	2	3	4	5	6	7	8	9	10	11	12	13	14

Note :- The leave book shall be made out separately for each worker on thick bonds sheets.

Signature of Manager

FORM 27

(see Rule 155)

NOMINATION FOR PAYMENT OF PAY DUE FOR PERIOD OF HOLIDAYS

IN THE EVENT OF DEATH OF WORKER

I hereby require that in the event of my death before resuming work, the balance of my pay due for the period of holidays shall be paid to who is my and resides at

Witnesses:

Attested

Signature

Designation

Address

Signature

Name

Designation

Department, etc.

Date :

Signature or left hand thumb impression of worker : -

Particulars or worker such as serial number in the register of adult/ child workers Section or address

FORM 28

(Prescribed under various schedules to Rule 160)

CERTIFICATE OF FITNESS

Serial No……

I certify that I have personally examined (name)

son of

residing at

who is desirous of being employed as (designation)

in (process, department and factory)

and that his age, as nearly as can be ascertained from my examination, is years, and that he is, in my opinion, fit / unfit for employment in the above mentioned factory as mentioned above.

2. He may be produced for further examination after a period of

.

3. The serial number of the previous certificate is

.

Signature or left
hand thumb impression of person
examined

Signature of Certifying Surgeon Date

I certify that I examined the person mentioned above on	I extend this certificate until (if certificate is not extended, the period for which the worker is considered unfit for work is to be	Signs and symptoms observed during examination	Signature of the certifying surgeon
1	2	3	4

FORM 29

(Prescribed under various Schedule to 160)

HEALTH REGISTER

		Sl.No
		Deptt/ Works
		Name of Workers
		Sex
		Age at last birth day
		Date of employment on present work
		Date of leaving or transfer to other work
		Reasons for discharge or transfer
		Nature of job or occupation
		Raw materials products or by-products likely to be exposed to
		Signs and symptoms observed during examination
		Nature of tests and results thereof
		If declared unfir for work,sate period of suspension with reasons in details
		Whether certificate of unfitness issued to the worker
		Re-certified fit to resume duty on
		Signature of the Certifying Surgeon with date

FORM 30

[see Rule 161 (2)]

REPORT OF ACCIDENT OR DANGEROUS OCCURRENCE RESULTING IN DEATH OR BODILY INJURY

1.Name of occupier (or factory)/ employer :
2.Address of works/ premises where the accident or dangerous occurrence took place :
3.Nature of industry :
4.Branch or department and exact place where the accident or dangerous occurrence took place :
5.Name and address of the injured person :
6. a) Sex :
b)Age (at the last birthday) :
c)Occupation of the injured person :
7.Local E.S.I.C. office to which the injured person is attached :
8.Date, shift and hour of Accident or dangerous occurrence :
9. a) Hour at which the injured person started work on the day of accident or dangerous occurrence :
b)Whether wages in full or part are payable to him for the day of the Accident or dangerous occurrence. :
10.a) Cause or nature of accident or dangerous occurrence :
b)If caused by machinery –
i)give the name of machine and the part causing the accident of dangerous occurrence. :
ii)state whether it was moved by mechanical power at the time of accident or dangerous occurrence :
c)State exactly what the injured person was doing at the time of accident or dangerous occurrence :
d)In your opinion, was the injured person at the time of accident or dangerous occurrence.
i)acting in contravention of provisions of any law applicable to him :
or
ii)acting in contravention of any orders given by or on behalf of his

employer :

or

iii)acting without instructions from his employer.

e)In case reply to (d) (i), (ii) or (iii) is in the affirmative, state whether the act was done for the purpose of and in connection with the employer's trade or business.

11.In case the accident of dangerous occurrence took place while traveling in the employer's transport, state whether –

a)the injured person was traveling as a passenger to or from his place of work :

b)the injured person was traveling with the express or implied permission of his employer;

c)the transport is being operated by or on behalf of the employer or some other person by whom it is provided in pursuance of arrangements made with the employer; :

and

d)the vehicle is being/ not being operated in ordinary course of public transport service :

12.In case the accident or dangerous occurrence took place while meeting emergency, state a)its nature; and b)whether the injured person at the time of accident or dangerous occurrence was employed for the purpose of his employer's trade or business in or about the premises at which the accident or dangerous occurrence took place.

13.Describe briefly how the accident or dangerous occurrence took place :

14.Name and address of witnesses : (1)

(2)

15.a) Nature and extent or injury (e.g. fatal, loss of finger, facture of leg, scald, scratch followed by sepsis, etc.)

: b) Location of injury (e.g., right leg, left hand, left eye, etc.) :

16.a) If the accident or dangerous occurrence not fatal,. State whether the injured person was disabled for more than 48 hrs:

b) Date and hour of return of work :

17.a) Physician, dispensary or hospital from whom or in which the injured person received or is receiving treatment :

b) Name of dispensary/ panel doctor elec- ted by the injured person :

18.a) Has the injured person died? :

b) If so, date of death :

I certify that to the best of my knowledge and belief the above particulars are correct in every respect.

Signature of Manager/ Employer

Name, Designation and address of manager/ employer

Date of dispatch of report :

……

(This space is to completed by the Inspector of Factories)

District …… : Date or receipt :

Name of the accident or dangerous occurrence : Causation :

Other particulars (e.g. fatal, leg injury, arm injury, etc) :

Date of investigation :

Result of investigation :

FORM

[see Rule 161 (2)]

REPORT OF DANGEROUS OCCURRENCE WHICH DOES NOT RESULT IN DEATH OR BODILY INJURY

1.Name and address of factory :

2.Name of Occupier :

3.Name of Manager :

4.Nature of industry :

5.Branch or department and exact place where the dangerous occurrence took place :

6.Date and hour of dangerous occurrence :

7.Nature of dangerous occurrence (State exactly what happened) :

I certify that to the best of my knowledge and belief the above particulars are correct

in every respect.

Signature of manager :

Name, designation and address of manager :

Date of dispatch of report :

(To be completed by the Inspector of Factories)

District …… : Date or receipt :

Name of the accident Causation :

or dangerous occurrence :

Other particulars (e.g. fatal, leg injury,

arm injury, etc) :

Date of investigation :

Result of investigation :

FORM
32

[see Rule 161(4)]

REPORT OF FURTHER DETAILS OF ACCIDENT

(To be sent to the Inspector of Factories within 28 days of the occurrence of the accident and once every fortnight thereafter as necessary until the final report on the date of return to work of the person injured is made.)

1.Registration number of the factory : -

2.Name & address of the Factory : -

3.Name of the person injured

: - 4.Date and hour of accident : -

5.Date of return to work : -

6.Number of days the person injured was away from work : -

7.Details of disablement, if any : -

8.Percentage loss of earning capacity if any (give reference to the medical certificate and

enclose copy of the same) : -

9.Details of payment of disablement benefit where such payment is made by the employer

himself : -

10.If the person is still undergoing treatment, state present position, where he is undergoing treatment, when he is likely to be fit to resume

work, etc. : -

11.Any other relevant information : -

I certify that to the best of my knowledge and belief the above particulars are correct in every respect.

Signature of Manager
(Name in Block letters)

FORM 33

(see Rule 162)

NOTICE OF POISONING OR DISEASE

(See instructions on reverse)

1. Name of factory with address : - 2.
Factory Registration Number : - 3.
Occupiers' Office address : - 4.
Occupiers' residential address : - 5.
Nature of Industry : - 6.
Name and works number of patient : - 7.
Residential address of patient : - 8.
Sex and Age of Patient : - 9.
Precise occupation of patient : -
10. Nature of poisoning or disease from which patient is suffering : -
11. Has the case been reported to the Inspector of Factories and the Certifying Surgeon? : -

Full Signature of Manager/ Occupier with seal and Date :

……
……

(To be filled in by the Chief Inspector)

Number of the case :
Remarks :

……
……

Notice of Poisoning or Disease

(Extract from the Factories Act, 1948 (Section 89)

Where any worker in a factory contracts any disease specified in the schedule, the manager of the factory shall send a notice thereof to such authorities, and in such form and within such time, as may be prescribed.

SCHEDULE

LIST OF NOTIFIABLE DISEASES

1.Lead poisoning, including poisoning by any preparation of lead or their sequelae. 2.Lead tetra-ethyl poisoning.

3.Phosphorous poisoning or its sequelae.
4.Mercury poisoning or its sequelae.
5.Manganese poisoning of its sequelae.
6.Arsenic poisoning or its sequelae.
7.Poisoning by nitrous fumes.
8.Carbon disulphide poisoning.
9.Benzene poisoning, including poisoning by any of its homologues, their nitro or amide derivatives or its sequel.
10.Chrome ulceration or its sequelae.
11.Anthrax.
12.Silicosis.
13.Poisoning by halogen derivatives of the hydrocarbons of the aliphatic series.
14.Pathological manifestations due to –
a)radium or other radio-active substances; and
b)x-rays
15.Primary epitheliomatous cancer of skin.
16.Toxic anemia.
17.Toxic jaundice due to poisonous substances.
18.Oil acne or dermatitis due to mineral oils and compounds containing mineral oil base.
19.Byssinosis
20.Asbestosis
21.Occupational or contract dermatitis caused by direct contract with chemicals and paints. These are of two types that is, primary irritants and allergic sensitizers.

Extract from the Tripura Factories Rules, 2007 (Rule 162)

A notice in Form 33 should be sent forthwith both to the Chief Inspector and to the Certifying Surgeon, by the manager of a factory if factory in which there occurs a case of lead, phosphorous, mercury, manganese, arsenic, carbon bi-sulphide or benzene poisoning; or of poisoning by nitrous fumes or by halogens or hologen derivatives of the hydrocarbons of aliphatic series; or of chrome ulceration, anthrax, silicosis, toxic anemia, toxic jaundice, primary epitheliomatous cancer of skin, or of pathological manifestations due to radium or other radio-active substances or x-rays.

FORM
34

(see Rule 164)

ABSTRACT OF THE FACTORIES ACT, 1948 AND THE TRIPURA FACTORIES RULES, 2007

(To be affixed in a conspicuous and convenient place at or near the main entrance to the factory)

Interpretation

1.**"Factory"** means any premises including the precincts thereof –

i)Wherein ten or more workers are working, or were working on any day of the proceeding twelve months, and in any part of which a manufacturing process is being carried on with the aid of power, or is ordinarily so carried on, or

ii)Wherein twenty or more workers are working, or were working on any day of the proceeding twelve months, and in any part of which manufacturing process is being carried on without the aid of power, or is ordinarily so carried on.

but does not include a mine subject to the operation of the Mines Act, 1952 (35 of 1952), or a mobile unit belonging to the Armed Forces of Union, a railway running shed or hotel restaurant or eating place.

Explanation: - For computing the number of workers for the purposes of this clause all the workers in different relays in a day shall be taken into account.

2.**"Worker"** means a person employed, directly or through any agency (including a contractor) with or without the knowledge of the principal employer, whether for remuneration or not, in any manufacturing process, or in cleaning any part of the machinery or premises used for a manufacturing process, or in any other kind of work incidental to, or connected with, the manufacturing process, or the subject of the manufacturing process; but does not include any member of the armed forces of the Union.

3.**"Manufacturing Process"** means any process for –

i)making, altering, repairing, ornamenting, finishing, packing, oiling, washing, cleaning, breaking up, demolishing, or otherwise treating or adapting any article of substance with a view to its use, sale, transport, delivery or disposal, or

ii)pumping oil, water, sewage or any other substances;

iii)generating, transforming or transmitting power; or

iv)composing types of printing, printing by letter press, lithography, photogravure or other similar process or bookbinding; or

v)constructing, reconstructing, repairing, refitting, finishing or breaking up ships or vessels; or

vi)preserving or storing any article in cold storage.

Working hours, holidays, intervals after rest, etc.

4.Hours of work for adults (Sections 51 and 54). – No adult worker shall be required or allowed to work in a factory for more than 48 hours in any week and for more than 9 hours in any day.

5.Relaxation of hours of work for adults (Section 64). – The ordinary limits on working hours may be relaxed in certain special cases, e.g., workers engaged on urgent repairs; in work in the nature or preparatory or complementary work which must necessarily be carried on outside the limits laid down for the general working of

the factory; in work which is necessarily so intermittent that the intervals during which they do not work while on duty ordinarily amount to more than intervals for rest; in any work which for technical reasons must be carried on continuously; in making or supplying articles of prime necessity which must be made or supplied every day; in a manufacturing process which cannot be carried on except during fixed seasons, or at times dependent on the irregular action of natural forces; in engine rooms or boiler houses or in attending to power plant or transmission machinery; in the printing of news papers, who are held up on account of the breakdown of machinery; in the loading or unloading of railway wagons or lorries or trucks; and in any work which is notified by the State Government in the Official Gazette as a work of national importance.

Except in the case of urgent repairs, the relaxation shall not exceed the following limits of work inclusive of overtime: -

i)the total number of hours of work in any day shall not exceed ten.

ii)the spread over inclusive of intervals for rest, shall not exceed 12 hours in any one day;

iii)the total number of hours of work in a week including overtime, shall not exceed sixty;

iv)the total number of hours of overtime work shall not exceed fifty for any one quarter.

6.**Payment for overtime** (section 59): Where a worker works in a factory for more than 9 hours in any day or for more than 48 hours in any week, he shall, in respect of overtime work, be entitled to wages at the rate of twice his ordinary rate if wages.

7.**Exemption of supervisory staff** (section 64): - Chapter IV, other than the provisions of clause (b) of sub section (1) of section 66 and the proviso to that sub-section, of the Act -- working hours of adults does not apply to persons holding position in a factory-management or are employed in confidential position in a factory management provided that where the ordinary rate of wages of such person does not exceed rupees seven hundred and fifty per month, they are entitled to extra wages in respect of overtime work under Section 59.

8.**Weekly holiday** (Adults) (Section 52). – No adult worker shall be required or allowed to work in a factory on the first day of the week, unless –

a)he has, or will have, a holiday for a whole day on one of the three days immediately before or after the said day, and

b)the manager of the factory has, before the said day or the substituted day under clause (a) which is earlier.

i)delivered a notice at the office of the Inspector of his intention to require the worker to work on the said day and of the day which is to be substituted; and

ii)displayed a notice to that effect in the factory;

Provided that no substitution shall be made which will result in any worker working for more than ten days consecutively without a holiday for a whole day.

9.**Compensatory holidays** (Section 53). – Where a worker in a factory, as a result of exemption from the ordinary provision relating to weekly holidays, is deprived of any of the weekly holidays, he shall be allowed, within the month in which the holidays were due to him or within the two months immediately following that month, compensatory holidays of equal number of the holidays so lost.

10.**Intervals for rest for adults** (Section 55 and 56).- The periods of work of adult workers in a factory each day shall so fixed that no period shall exceed 5 hours before he has had an interval for rest of at least half an hour and that inclusive of his intervals for rest they shall not spread over more than ten and a half hours in any day or, with the permission of the Chief Inspector of Factories in writing, 12 hours.

11.**Prohibition of double employment** (Section 60, 71 & 99) – No child or, except in certain circumstances, an adult worker, shall be required or allowed to work in any factory on any day on which he has already been working in any other factory.

If a child works in a factory on any day on which he has already been working in another factory, the parent or guardian of the child or the person having custody of or control over him or obtaining any direct benefit from his wages, shall be punishable with fine, which may extend to Rs. 50 unless it appears to the court that the child so worked without the consent of connivance of such parents, guardian or person.

12.**Prohibition of employment of children under 14** (Section 67). – No child who has not completed his fourteenth year shall be required or allowed to work in any factors. 13.**Hours of work for children** (Section 71) – No child shall be employed or permitted to work in any factory for more than four and a half hours in any day and during the period of at least twelve consecutive hours which shall include the interval between 10 P.M. and 6 A.M. The periods of work of all children employed in a factory shall be limited to two shifts which shall not overlap or spread over more than 5 hours each and each child shall be employed in only one of the relays.

The provision relating to weekly holidays shall also apply to child workers and no exemption from this provision may be granted in respect of any child.

14.**Prohibition of employment of women** (Section 66) – No woman shall be required or allowed to work in any factory except between the hours of 6 A.M. and 7 A.M. The State Government may vary these limits or exempt this restriction in case of women working in fish-curing or fish-canning factories.

Leave with Wages

15.**Leave with wages** (Section 79, 80 and 83 and Rules). – Every worker who has worker for a period of 240 days or more in a factory during a calendar year shall be allowed during the subsequent calendar year leave with wages for a number of days calculated at the rate of -

i)if an adult, one day for every twenty days of work performed by him during the previous calendar year; and

ii)if a child, one day for every 15 days of work performed by him during the previous calendar year.

Explanation. 1. – For the purpose of this sub-section –

a)any days of lay off, by agreement or contract or as permissible under the standing orders;

b)in the case of female worker, maternity leave for any number of days not exceeding twelve weeks; and

c)the leave earned in the year prior to that in which the leave is enjoyed; shall be deemed to be days on which the worker has worked in a factory for the purpose of computation of the period of 240 days or more, but he shall not earn leave for these days.

Explanation 2 – The leave admissible under this sub-section shall be exclusive of all holidays whether occurring during or at either end of the period of leave.

For the leave allowed to him, a worker shall be paid at a rate equal to the daily average of his total full-time earnings, for the days on which he actually worked during the month immediately preceding the leave exclusive of any overtime and bonus, but inclusive of dearness allowance and the cash equivalent of the advantage accruing through the concessional sale to the worker of food grains and other articles.

A worker whose service commences otherwise than on the first day of January shall be entitled to leave at the rate indicated above, if he has worked for two–thirds of the total number of days in the remainder of the calendar year

If a worker is discharged or dismissed from service or quits his employment or is superannuated or dies while in service, during the course of the calendar year, he or his heir or nominee as the case may be, shall be entitled to wages in lieu of the quantum of leave to which he was entitled immediately before his discharge, dismissal, quitting of employment, superannuation or death, calculated at the rates specified above, even if he had not worked for the entire period specified above. Such payment shall be made –

i)Whether the worker is discharged or dismissed or quits employment, before the expiry of the second working day from the day of such discharge, dismissal or quitting; and

ii)Where the worker is superannuated or dies while in service, before the expiry of two months from the date of such superannuation or death.

If the employment of a worker who is entitled to leave with wages is terminated by the occupier before he has taken the entire leave to which he is entitled, or if having applied for and having not been granted such leave, the worker quits his employment before he has granted such leave, the occupier of the factory shall pay him the amount payable in respect of the leave not taken, and such payment shall be made before the expiry of the second working day after the day on which his employment is terminated and a worker who quits his employment, on or before the next pay day.

The manager shall maintain a register of leave with wages in the prescribed

Form 20 and shall provide each worker with a book called the 'Leave Book' in the prescribed From 21. The leave book shall be the property of the worker and the manager or his agent shall not demand it except to make entries of the dates of holidays or interruptions in service, and shall mot keep it for more than a week at a time. If a worker loses his leave book, the manager shall provide him with another copy on leave book on payment of Rs.2/= and shall complete it from his record.

Health

16.Cleanliness (Section 11). – Except in cases specially exempted, all inside walls and partitions, all ceilings or tops of rooms and all walls, sides and taps of passages and stair-cases in a factory shall be kept whitewashed or colour-washed. The whitewashing or colourwashing shall be carried out at least once in every period of fourteen months. The floor of every workroom shall be cleaned at least once in every week by washing, using shall be cleaned at least once in every week by washing, using shall be cleaned at least once in every week by washing, using disinfectant, where necessary, or by some other effective method.

17.Disposal of wastes and offluents (Section 12). – Effective arrangements shall be made in every factory for the treatment of wastes and effluents due to the manufacturing process carried on therein, so as to render then innocuous, and for their disposal.

18.Ventilation and temperature (Section 13) – Effective and suitable provision shall be made in every factory for securing and maintained in every workroom adequate ventilation by the circulation of fresh air and such a temperature as will secure to workers therein reasonable conditions of comfort and prevent injury to health. 19.Overcrowding (Section 16). – Unless exemption has been granted, there shall be in every workroom of a factory in existence on the date of commencement of this Act at least 350 cubic feet and of a factory built after the commencement of this Act at least 500

cubic feet of space for every worker employed therein, and for this purpose no account shall be taken of any space which is more than 14 feet above the level of the floor of the room.

20.Lighting (Section 17): - In every factory effective arrangements shall be made to provide and maintain at suitable points conveniently situated for all workers employed therein, a sufficient supply of wholesome drinking water.

21.In every factory wherein more than 250 workers are ordinarily employed the drinking water shall, during hot weather, be cooled by ice or other effective methods. The cooled drinking water shall be supplied in every canteen, lunchroom and restroom and also at conveniently accessible points throughout the factory.

22.Latrines and urinals (Section 19 and Rules). – In every factory sufficient latrine and urinal accommodation of the prescribed types (separate enclosed accommodation for male and female workers) shall be provided conveniently situated and accessible to workers at all times while they are at the factory. Every latrine shall be under cover and so partitioned off as to secure privacy and shall have a proper door and fastenings. Sweepers shall be employed whose primary duty it would be to keep clean latrines, urinals and washing places.

23.Spittoons (Section 20). – In every factory, there shall be provided a sufficient number of spittoons of the type prescribed in convenient places and they shall be maintained in a clean and hygienic condition. No person shall spit within the 'premises of a factory except in the spittoons provided for the purpose. Whoever spits in contravention of this provision shall be punishable with fine not exceeding five rupees.

Safety

24.Fencing of machinery (Section 21): - In every factory dangerous parts of machinery e.g., every moving part of a prime mover and every flywheel connected to a prime mover, etc. shall be securely fenced by safeguards of substantial construction which shall be constantly

maintained and kept in position while the parts of machinery they are fencing are in motion or in use.

25.Work on or near machinery in motion (Section 22). – No woman or young person shall be allowed in any factory to clean, lubricate or adjust any part of a prime mover or any transmission machinery while the prime mover or the transmission machinery is in motion, or to clean, lubricate or adjust any part of any machine if the cleaning, lubrication or adjustment thereof would expose the woman or young person to risk of injury from any moving part either of that machine or of any adjustment machinery. 26.Employment of young persons on dangerous machines (Section 23). – No young persons shall work at any machine declared to be dangerous unless he has been fully instructed as to the dangerous arising in connection with the machine and the precautions to be observed and has received sufficient training in work at the machine or is under adequate supervision by a person who has thorough knowledge and experience of the machine.

27.Casing of new machinery (Section 26). – In all machinery driven by power and installed in any factory after the commencement of this Act. Every set screw, bolt or key on any revolving shaft, spindle, wheel or pinion shall be so sunk, encased or otherwise effectively guarded as to prevent danger; all spur, worm and other toothed or friction gearing which does not require frequent adjustment while in motion shall be completely encased, unless it is so situated as to be as safe as it would be if it were completely encased.

Whoever sells or lets on hire or, as agent of a seller or hirer, causes or procedures to be sold or let on hire, in a factory any machinery driven by power which does not comply with these provisions or any rules made under this section, shall be punishable with imprisonment for a term which may extend to three months or with fine which may extend to five hundred rupees or with both.

28.Prohibition of employment of women and children near cotton openers (Section 27) – No woman or child shall be employed in any part of a factory for pressing cotton in which a cotton opener is at work.

29.Excessive weights (Section 34 and Rules). – No woman or young person shall, unaided by another person, lift, carry or move by hand or on head, any material, article, tool or appliance exceeding the maximum limit in weight set out the following schedule: -

[see Rule 165(a)]

ANNUAL RETURN

For the year ending 31st December, 2 …….

1. Registration number of Factory …… 2.
Name of Factory : -
3. Name of Occupier : -
4. Name of the Manager : -
5. District
: - 6. Full postal address of Factory
: -
7. Nature of Industry : -

Number of workers and particulars of employment 8.No.
of days worked in the year : -
9.No. of man-days worked during the year
a)Men : -
b)Women : -
c)Children : -

10.Average number of workers employed daily (See explanatory note) –

a) Adults

i) Men : -

ii) Women : -

b) Adolescent

i) Male : -

ii) Female : -

c) Children

i) Boys : -

ii) Girls : -

11.Total No. of man-hours worked including overtime -

a)Men : -

b)Women : -

c)Children : -

12.Average number of hours worked per week (See explanatory note)

a)Men : -

b)Women : -

c)Children : -

13.a) Does the factory carry out any process or operation declared as dangerous under section 87 ? (See Rule 160)

b) If so, give the following information : -

Name of the dangerous processes or operations carried on. (State the Schedule number under Rule 160)	Average No. of persons employed daily in each of the processes or operation given in Col.1
1.	2.
i)	
ii)	
iii)	

LEAVE WITH WAGES

14.Total number of workers employed during the year

a)Men : -

b)Women : -

c)Children : -

15.Number of workers who were entitled to annual leave with wages during the year -

a)Men : -

b)Women : -

c)Children : -

16.Number of workers who were granted leave during the year -

a)Men : -

b)Women : -

c)Children : -

17.a) Number of workers who were discharged,

or dismissed from the service, or quit employment, or were superannuated, or who died while in service during the year.

b) Number of such workers in respect or whom wages in lieu of leave were paid.

Safety Officers

18.a) Number of Safety Officers required to be appointed as per Notification under Section 40-B.

b) Number of Safety Officers appointed.

Ambulance-room

19.Is there an ambulance room provided in the factory as required under section 45?

Canteen

20.a) Is there a canteen provided managed -
i)Departmentally, or

ii)Through a contractor?

Shelter or Rest rooms and Lunch rooms

21.a) Are there adequate and suitable shelters or rest rooms provided in the factory as required under section 47?

b) Are there adequate and suitable lunch rooms provided in the factory as required under section 47?

Creches

22.Is there a Creche provided in the factory as required under section 48?

Welfare Officers

23.a) Number of Welfare Officers to be appointed as required under section 49.

b) Number of Welfare Officers appointed.

Accidents

24.a) Total number of accidents (See explanatory note)
i)Fatal
ii)Non-fatal

b)Accidents in which workers returned to work during the year to which injured workers returned to work during the year to which this return relates.

i)Accidents (workers injured) occurring during the year in which injured workers returned to work during the year to which this return relates.

aa) Number of accidents : -

bb) Man-days lost due to accidents : -

ii)Accidents (workers injured) occurring in the previous years in which injured workers returned to work during the year to which this return relates.

aa) Number of accidents : -

bb) Man-days lost due to accidents : -

iii)Accidents (workers injured) occurring during the year in which injured workers did not return to work during the year to which this return relates.

aa) Number of accidents : -

bb) Man-days lost due to accidents : -

Certified that the information furnished above is to the best of my knowledge and belief correct.

Date_____ Signature of the Manager

Explanatory Notes:

1.The average number of workers employed daily should be calculated by dividing the aggregate number of attendances on working days (that is, man-days worked) by the number of working days in the year. In reckoning attendance, attendance by temporary as well as permanent employees should be counted and all employees should be included, whether they are employed directly or by or through any agency including contractors. Attendance on separate shifts (e.g. night and day shifts) should be counted separately. Days on which the factory was closed for whatever cause, and days on which manufacturing process were not carried on should not be treated as working days. Partial attendance for less than half a shift on working days should be ignored, while attendance for half a shift or more on such day should be treated as full attendance.

2.For seasonal factories, the average number of workers employed during the working season and the off-season should be given separately. Similarly the number of days worked and average number of man hours worked per week during the working and off-season should be given separately.

3.The average number of hours worked per week means the total actual hours worked by all workers during the year excluding the rest intervals but including over-time work divided by the product of total number of workers employed in the factory during the year and 52. In case the factory has not worked for the whole year, the number of weeks during which the factory worked should be used in place of the figure 52.

4.Every person killed or injured should be treated as one separate accident. If in one occurrence, six persons were injured of killed, it should be counted as six accidents.

5.In item 24(a), the number of accidents which took place during the year should be given. In case of non-fatal accidents only those accidents which prevented workers from working for 48 hours or more, should be indicated.

Form 38

(see rule 171)

REGISTER OF ACCIDENTS AND DANGEROUS OCCURRENCES

Name of injured person	Date of Accidents/ Dangerous Occurrence	Date of Report on Form 30 or 31	Nature of Accidents or Dangerous Occurrence	Date of Return of injured person to	Number of days injured person was absent from
1	2	3	4	5	6

Signature of Manager

Date: -

Form 39

[see Rule 173(2)]

NOTICE OF CLOSURE

Name of factory and full address	Nature of manufacturing process	Date of closure	Reasons of closure	Nature of closure whether entire or partial; if partial, the shift, section or department	Number of workers on the muster roll of factory at the time of closure	Number of workers affected by the closure
1	2	3	4	5	6	7

Signature of Manager

Date: -

Form 40

[see Rule 173(3)]

NOTICE OF REOPENING THE FACTORY AFTER CLOSURE

Name of factory and full address	Nature of manufacturing process	Date of closure	Number of worker affected at the time of	Factory or any shift section or department thereof reopened	Number of workers on muster roll at the time of reopening	Number of workers (i) re-employed (ii) newly employed.
1	2	3	4	5	6	7

Signature of Manager
Date: -

By order of the Governor,

(**S.Sailo**)

Commissioner & Secretary to
the Government of Tripura