

Maharashtra Factories Rules, 1963

Chapter I

Preliminary

1. Short title and extent :— (1) These rules may be called the **Maharashtra Factories Rules, 1963.**

(2) They extend to the whole of the State of Maharashtra.

2. Definitions:—In these rules, unless the context otherwise requires,—

(a) "Act" means the Factories Act, 1948;

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

(c) "Artificial Humidification" means the introduction 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 openings at times when the temperature of the room is 83 degrees or more, shall not be deemed to be artificial humidification;

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

(e) "Degrees" (or temperature) means degrees on the Fahrenheit scale;

(f) "District Magistrate" includes such other official as may be appointed by the State Government in that behalf;

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

(h) "Fume" includes gas or vapour;

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

(i) "Hygrometer" means an accurate wet and dry bulk 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 a District Magistrate;

(l) "Maintained" means maintained in an efficient state, in efficient working order and in good repair;

(m) "Manager" means the person responsible to the occupier for the working of the factory for the purposes of the Act;

(n) " Section" means a section of the Act. Rules 3 to 11 prescribed under sub-section (l) of section 6

3. Approval of plans :—(2) An application for obtaining previous permission for the site on which factory is to be situated and for the construction or extension of a factory shall be made to the Chief Inspector of Factories.

Application for such permission shall be made in Form 1 which shall be accompanied by the following documents: -

¹[(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 used, intermediate products, including emission of toxic gasses, 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 hazard and the methods to control or eliminate them.]

(b) Plans in duplicate drawn to scale, showing—

(i) the site of the factory and immediate surrounding 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 natural lighting, ventilation and means of escape in case of fire. The plans shall also clearly indicate the position of the plant and machinery, aisles and passage ways; and

(c) Such other particulars as the Chief Inspector may require:

² [Provided that where any inflammable solvent for the extraction of oil from oil-cakes, oil seeds or any other material is to be or

Footnotes:

1. Subs, by G. N. dt.8-2-1988 M.G.G., Part IL, Ext. p.57

2. Added by G. N. of 24th May, 1969.

intended to be used, handled or treated in any manner in any process which may be conducted in any factory such application shall also be accompanied by a no objection certificate in respect of the site of the factory from the local authority concerned and any officer not below the rank of Town a Planner in Directorate of Town Planning in charge of the area appointed by the State Government in this behalf.]

(2) If the Chief Inspector is satisfied that the plans are in consonance with the requirements of the Act, he shall, subject to such conditions 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:

¹[Provided that no such approval shall be given in respect of the site of any factory referred to in the proviso to sub-rule (1) unless the Chief Inspector of the factory and the District Magistrate concerned have personally visited the site of the factory and have approved the same, and in case of any difference of opinion among the authorities regarding the location of the plant the matter shall be referred to the State Government for decision:

Provided further that no place shall be disapproved unless the applicant is given an opportunity to be heard and the Chief Inspector or as the case may be the State Government has its recorded reasons in that behalf]

²**[3-A. Certificate of Stability:—**(I) No manufacturing process shall be carried out in any premises of a factory constructed, reconstructed or extended or in any premises which has been taken into use as a factory or part of a factory until a certificate of stability issued by a competent person in respect of every work of engineering construction in the Form 1-A has been sent by the Occupier of the factory to the Chief Inspector of Factories, and approved by him:

Provided that, for the factories which are in existence on the date of the notification of these rules, the certificate of stability in Form 1-A, may be sent to the Inspector of Factories 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

Footnotes:

1. Added by G. N. of 24th May, 1969.
2. Ins. by G. N., dt. 13-3-1994 published in M.G.G., Pt. I-L (Extra), dt. 19-7-84, P. 197.

in Form 1-A is obtained from a competent person once in each period of 5 years or after extension, alteration, repairs or addition of any work of engineering construction or replacement, or addition of machinery, plant, etc., and sent to the Chief Inspector :

Provided also that the foregoing provisions are without prejudice to the provision of sections 39 and 40 of the Factories Act.

Explanation (1):—For the purpose of this rule competent person means—

- (i) A Member or Associate Member of Institute of Civil Engineers; or
- (ii) A Member of Institute of Structural Engineers;
- (iii) A Full Member or Associate Member of Institute of Engineers (India), in the branch of Civil Engineering or Structural Engineering;
- (iv) A Civil Engineer of Public Works, not below the rank of Executive Engineer.

Explanation (2):—“ Work of Engineering Construction” means any building, tank silo, scaffold, platform, chimney, bridge, supporting structural work retaining wall or any similar structure.

1[4. Use of premises as a factor:—No occupier shall use any premises as a factory unless.—

(1) The plans are got approved from the Chief Inspector of Factories or the Deputy Inspector of Factories as the case may be, in respect of the following items namely:—

site on which the factory is to be situated;

Buildings and extension used for the purposes of manufacturing process ;

“The layout of plant and machinery, including the storages for raw materials and finished products, intermediate by-products”;

any changes total or partial in manufacturing processes.

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

The conditions subject to which plans are approved are complied with;

A licence is obtained under rule 6 from the Chief Inspector of Factories or renewed under rule 8 by the Deputy Chief

Footnotes:

1. Subs. by G. N., dt. 1-12-1982, published in *M.G.G.* Pt. I-L, dt. 3-2-83, P. 699.

Inspector of Factories and the said licence is valid at the relevant time;

Explanation:—For the purpose of this sub-rule a licence shall be deemed to be valid only if,—

- (a) the fees including additional fees, if necessary are paid ;
- (b) the employment of workers for which licence is granted is not exceeded;
- (c) the limit of the installed power for which licence is granted is not exceeded.

¹(5) Necessary Certificates under Rule 22 are obtained";

²(6)The conditions subject to which the licence is granted or renewed as the case may be are complied with.

5. Application for registration and grant of licence:—(1) The occupier or manager of every factory coming within this scope of this Act after its commencement shall submit to the Chief Inspector an application in triplicate in Form 2 for the registration of the factory accompanied by an application in Form 3 for the grant of licence therefor for a period not exceeding ³[ten years]:

Provided 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 (lays) of the date of that notification.

(2) Every such application shall be accompanied by a treasury receipt or the cheque or by an Indian Postal Order or an invoice for book adjustment, as the case may be, for payment of the fees prescribed for the purpose as specified by the ⁴[Schedule below as applicable] ⁶[with effect from the 1st January 1990] :—

⁶[**SCHEDULE**⁷[**A**]

All factories except Power Generating Stations and Electrical Sub-Stations

Footnotes:

1. Ins. by G. N., dt. 8-2-1988, *M.G.G.* Pt. I-L (Extra) P.57.
2. Renumbered by G. N. dt. 8-2-1988, *M.G.G.*, Pt. I-L, (E.xt.) P. 57.
3. Subs. by G. N. dt. 30-11-2000, *M.G.G.*, Pt. I-L, Ext. dt. B 30-11-2000, P. 243.
4. Subs. by G. N. dt 22-5-1984.
5. Subs. by G. N. of 30-6-1990.
6. Subs. by G. N. of 21-5-86.
7. Subs. by G. N. Of 22-5-1984.

¹[SCHEDULE 'A']

**All Factories (except power generating stations and Electrical Sub-stations)
Maximum Number of person to be employed on the day during the year**

Quantity of H.P. Installed Maximum H. P.	Upto 9	Form 10 To 20	Form 21 To 50	Form 51 To 150	Form 151 to 250	Form 251 to 500	Form 501 to 1000	Form 1001 to 2500	Form 2501 to 4000	Form 4001 and above
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.			
Nil	100	125	250	1000	1500	3000-.,	6000	12000	18000	24,000
Upto 10	200	400	750	2000	3000	4500	9000	18000	24000	30,000
Above 10 but not above 50	300	700	1250	3000	4500	6000	12000	22500	27500	33,000
Above 50 but not above 100	800	1250	1750	4500	6000.	9000	15000	27000	30000	36,000
Above 100 but not above 500	1800	2500	3500	9000	12000	15000	22500	30000	36000	42,000
Above 500 but not above 1000	3500	4000	7500	12000	16500	19500	30000	36000	42000	48,000
Above 1000 but not above 2000	5000	7000	9500	16500	19500	24000	33000	42000	48000	54,000
Above 2000	7000	9500	16500	19500	24000	33000	42000	48000	54000	60,000]

Footnotes:

1. Schedule 'A' Subs. By G. N. dt. 20-10-1998

¹**SCHEDULE 'B'**

(Power Generating Stations)

General Capacity in Megawatts	Number of Workers			
	Upto 100	From 101 to 500	From 501 to 1,000	Over 1,000
	Rs.	Rs.	Rs.	Rs.
Upto 20 M. W.	1,200	1,800	3,000	4,500
Over 20 M.W. and upto 50 M.W.	1,700	2,700	4,500	6,000
Over 50 M.W. and upto 100 M.W.	2,500	3,500	6,000	7,500
Over 100 M.W. and upto 250 M.W.	3,500	4,500	7,500	9,000
Over 250 M.W. and upto 500 M.W.	4,500	6,000	9,000	10,500
Over 500 M.W. and upto 750 M.W.	7,000	7,000	10,500	12,000
Over 750 M.W. and upto 1000 M.W.	7,000	8,000	12,000	15,000
Over 1000 M.W.	8,000	9,000	15,000	18,000

²**[SCHEDULE C]**

(For Electrical Sub-stations etc.)

Rated capacity	More than 9 workers
Upto 20 M.V.A.	300
Over 20 M.VA and upto 50 M.V.A.	750
Over 50 M.VA. and upto 100 M.V.A.	1,500
Over 100 M.V.A. and upto 250 M.V.A.	2,200
Over 250 M.V.A. and upto 500 M.VA	3,000
Over 500 M.V.A. and upto 750 M.V.A.	3,600
Over 750 M.VA. and upto 1,000 M.VA	4,500
Over 1,000 M.V.A.	6,000

Footnotes:

1. Subs, by G. N. dt. 20-10-1998.

2.Subs, by G. N. dt. 20-10-1998.

Provided that—

(i) fees to be charged for the following classes of factories shall, subject to a minimum rupees five, be half, of those specified above, if they do not work for more than 180 days in the aggregate in a calendar year :—

- (a) Cotton Ginning and Pressing Factories,
- (b) Gur Factories,
Jarda Factories (tobacco processing),
Cashewnut Factories,
- (e) Groundnut Decorticating Factories,
- (f) Rice Mills;

(ii) in the case of other factories working for a part of the year, and commencing work on or after 1st day of July, the fees to be charged *Sat* the first time shall, subject to a minimum of rupees five, be half of those specified in the Schedule aforesaid:

Provided further that, if the period for which the licence is applied for is one year or more but does not exceed ¹[Five years] the fees payable therefore per year, shall be at the rates specified in this sub-rule.

²[(3) Where the fees for the grant or renewal of a licence for the year ³[1998 are paid before the ³[1st January 1998] and the fees so paid are less than the fees payable in accordance with rates prescribed in the Schedule in sub-rule (2), then the licensee shall pay the difference on or before the ³[31st day of October 1998.] If the licensee fails to pay the difference on or before the ³[31st day of October, 1998], he shall be deemed to have paid the fees after the expiry of the due date and an additional fee of 25 per cent, of the difference shall be payable by him.]

6. Grant of licence:—(1) The Chief Inspector may, on application being made to him under sub-rule (1) of rule 5 and on payment of the 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 4, to the applicant to use as factory such premises as are specified in the application and subject to compliance with such conditions as are specified in the licence :

Footnotes:

1. Subs. by M.G.G., Pt. I-L.s dt. 2-8-1997.
2. Subs. by G. N. of 30th June 1990.
3. Subs. by G. N. of 20th October 1998.

Provided that, subject to the provision of sub-section (3) of section 6, the Chief Inspector may refuse to register the factory and grant a licence if he is satisfied-

- (i) that an application is not accompanied by plans—r
 - (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 provided;
- (iv) that material requirement of the relevant provisions specified in Schedules to rule 114 in relation to the factory concerned have not been complied with; or
- (v) that there is imminent danger to life 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.
- ¹[(vi) that the details of the raw materials, intermediate products, finished products, quantities, methods of storages, hazards, safety measures, arrangements for trade-waste and effluents, the likely hazards and the methods to disposal etc., have not been furnished-]

(2) Subject to the provisions hereinafter contained with respect to ²[suspension] ³[and revocation] and unless earlier renewed under rule 8 every such licence shall remain in force until the 31st day of December next following and shall then expire.

7. Amendment of licence :—(I) A license granted under rule 6 may be amended by the Chief Inspector to Deputy Chief Inspector authorised by the State Government in this behalf.

(2) A licensee shall be required to have his license amended if there is change in the name of the factory ⁵ [or in the site on which the factory is situated] or if the factory for which the license is granted exceeds the limits specified in the licence in regard to horse.

Footnotes:

1. Ins. by G. N. of 8th Feb. 1988.
2. Sub. by G. N. of 30th Sept. 1965.
3. Ins. by G. N. of 13th October 1981
4. Ins. by G. N. of 23rd August 1969.
5. Ins. by G. N. of 24th July 1964.

power or the number of persons employed. The licensee whose licence is required to be amended shall submit it to the Chief Inspector ¹[or the Deputy Chief Inspector authorised under sub-rule (1)] with an application stating the nature of the amendment and reasons thereof:

Provided that no amendment of the licence shall be necessary in respect of changes in the number of workers or horse-power or both unless such changes involve higher licence or renewal fee.

(3) Where a licence is required to be amended under sub-rule (2) the fee to be paid for such amendment shall be equal to the difference between the licence or renewal fees due on the basis of the higher number of workers and horse-power and the fees for the grant of licence or renewal thereof already paid for the year or part thereof.

8. Renewal of licence:—(1) An application for the renewal of licence ² [for a period not exceeding ³[ten years]] shall be made to Chief Inspector ⁴[or the Deputy Chief Inspector authorised by the State Government in this behalf] in Form 3 accompanied by a treasury receipt or a cheque or by an Indian Postal Order or an invoice for book adjustment, as the case may be, for payment of the fees specified in the Schedule attached to rule 5, so as to reach him not later than two months before the date on which the licence is due to expire:

Provided that where a factory commences work on or after the 1st day of November in any year, application for renewal of the licence shall be made on or before the 1st day of January next following.

⁵ [(2) (a) On receipt of the application under sub-rule (1), the Chief Inspector or the Deputy Chief Inspector authorised under sub-rule (1) may, If he is satisfied that there is no objection to the renewal of the licence, renew the same for a period not exceeding ⁶[ten] years or may, after recording his reasons, refuse the renewal thereof on any of the grounds specified in the proviso to sub-rule (1) of rule 6.

Footnotes:

1. Ins. by G. N. of 23rd August, 1969;

2. Ins. by G. N. of 13th October 1981.

3. Subs. by M.G.G., Pt. I-L, dt. 30th November 2000, P. 243

4. Ins. by G. N. of 23rd August 1969.

5. Subs. by G. N. of 24th July, 1964.

6. Subs. by G. N. dt. 30th Nov. 2000, M.G.G., pt. I-L Ext, dt 30th, Nov. 2000,.

(b) The Chief Inspector may also refuse the renewal of the licence on the ground that the applicant has been guilty of repeated contraventions of the provisions of the Act or these rules or both, or the applicant has obtained the licence by fraud or by misrepresentation;

Provided that, in any case falling under clause (a) or (b) before refusing any licence applicant shall be given an opportunity to show cause why the licence should not be refused:

¹Provided that, if the period for which the renewal of licence is applied is one year or more but does not exceed ²[ten years, the fees payable under this sub-rule therefor per year, shall be at the rates specified in the Schedule attached to rule 5 :

³Provided also that where the application for the renewal of the licence is made after the expiry of the due date specified in this sub-rule, the additional graded fees at the percentage of the fees payable for the renewal of the licence specified in column 2 of the Schedule hereto shall be payable for such renewal of the licence for the period of delay specified in column 1 of that Schedule]

SCHEDULE

Period of delay	% of fees	Period of delay	% of fees
Upto one month	5%	Upto two month,	10%
Upto three months	15%	Upto four months-	20%
Upto five months and above	25%		

⁴[8-A. In calculating the amount of fee payable under these rules, the fraction of a rupee less than fifty paise shall be ignored and the fraction of a rupee of fifty paise and exceeding fifty naye paise shall be rounded off upto the next complete rupee.]'

9. When licence deemed to be granted or renewed:—

⁵[Where an application for grant or renewal of licence is duly made in accordance with these rules and if no licence has been issued or renewed within a period of four months, the factory in respect of which the licence is to be granted or renewed shall be deemed to be duly licenced.]

⁶Provided that in respect of application for grant or renewal of licence which has already been refused, if it is made again, the factory in respect-of which it is made, shall not be deemed to be licensed until the licence is actually granted or renewed.]

Footnotes:

1. Ins. by G. N. of 13th October 1981
2. Subs, by G. N. dt. 30th Nov. 2000, M.G.G., Pt.I-L, Ext., dt. 30th Nov. 2000.
3. Subs, by G. N. dt. 13th March 1985, M.G.G. Pt.I L, Ext, p. 98.
4. Ins. by G. N. of 3rd Sept. 1988, M.G.G., Pt.I-L, Ext., p. 341.
5. Ins. by G. N. dt. 4th August 1998.
6. Ins. by G. N. dt. 26th July 1991, p. 300.

Explanation:—For the purpose of this rule, an application for the grant or renewal of a licence shall be deemed to have been duly made only if it is in the prescribed form and is filled in with all relevant particulars and further is accompanied by & treasury receipt or a cheque or an invoice for book adjustment, as the case may be, for payment of the fees in accordance with the Schedule annexed to rule 5.

¹[9-A. Revocation of licence:—The Chief Inspector or the Deputy Inspector authorised under sub-rule (1) of rule 8 may, at time before the expiry of the period for which the licence has been granted or renewed, revoke the licence on any pf. the grounds specified in the proviso to sub-rule (1) of rule 6 or in clause (b) of sub-rule (2) of rule 8:

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

10. Procedure on death or disability of licensee:—If a licensee dies or becomes insolvent, the person carrying on the business of such licensee shall not be liable to any penalty under the Act for exercising the powers granted to the licensee by the licence during such time as may reasonably be required to allow him to make an application for the amendment of the licence under rule 7 in his own name for the unexpired portion of the original licence. .

11. Loss of licence :—(1) Where a licence granted under these rules is lost or destroyed a duplicate thereof may be granted on payment of a fee of rupees five.

(2) The Chief Inspector may require a licensee to obtain a duplicate licence on payment of rupees five, if the original licence is defaced or spoiled;

Provided that, the Chief Inspector may issue a duplicate licence without charge if he is satisfied that there are good and sufficient reasons for doing so.

12. Mode of payment of fees :—(1) Every application under these rules, shall be accompanied by a treasury receipt showing that the appropriate amount of fee has been paid into the local treasury under the head of account ²[0230-Labour and Employment-104-fees realised under the Factories Act, 1948 (0230-0045)] or by a crossed cheque or crossed Indian Postal Order for the appropriate amount of fees drawn in favour of Chief Inspector :

Provided that, in the case of the factories in Greater Bombay, the application shall always be accompanied by a crossed cheque or a crossed Indian Postal Order:

Footnotes:

1. Ins. by G. N. dt. 13th October 1981
2. Subs. by M.G.G. pt I-L, dated 15 March 1997.

Provided further that, in the case of a Government factory, the payment of the appropriate amount of fees shall be made in the same manner as payments of amounts due by one Government department to another are ordinarily made.

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

Where such application is granted, any amount paid by the applicant in excess of the prescribed fee shall be refundable only after the expiry of one year from the date of such grant or the same may be adjusted against payment of any fees due the next succeeding year.

13. Suspension of licence on request of licensee:—(1) If before the 31st October of any year an occupier notifies his intention in writing to the Chief Inspector or the Deputy Chief Inspector authorised by the State Government in this behalf that during the following year the premises in respect of which licence is issued will not be used for the working of the factory, the Chief Inspector ²[or the Deputy Chief Inspector so authorised] may suspend the licence granted in respect of such factory.

(2) A licence suspended under sub-rule (1) may be on receipt of an application for renewal in Form 3, accompanied by the licence, for the remaining part of the year, on payment of surcharge of 10 per cent in addition to the fees specified in these rules.

Form prescribed under sub-section (1) of section 7

14. Notice of occupation:—The notice of occupation shall be in Form 2.

15. Notice of change of Manager:—Notice of change of Manager shall be in Form 5.

Chapter II

The Inspecting Staff

Rule prescribed under sub-section (1) of section 8

16. Appointment of Inspectors:—No person shall be appointed as Inspector for the purposes of the Act, unless he possesses the qualification prescribed for such Inspectors in the Bombay Civil Services Classification and Recruitment Rules at the time of his appointment.

Rules prescribed under section 9

Footnotes:

1. Subs. by G. N. dt. 30th Sept. 1965.
2. Ins. G. N. of 23rd Aug. 1969.

17. Powers of Inspectors:—An Inspector shall, for the purpose of the execution of the Act have power to do all or any of the following things that is to say :—

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

(b) in the case of a Inspector who is duly qualified medical practitioner to carry out such medical examinations as may be necessary for the purposes of the duties under the Act;

(c) to prosecute, conduct or defend before a Court any complaint, 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 Inspectors 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 wafer (section 18), latrines and urinals (section 19), Spitoons (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 orders⁴ or remarks under sections 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 directed the attention of manager occupier of the factory, as the case may be,

(ii) all Additional Inspectors except District Magistrates shall report the defects found and remedies suggested for enforcing compliance with requirements of sections referred to above, to the Chief Inspector who shall pass final orders in each case.

Rule prescribed under sub-section (4) of section 10

18. Duties of Certifying Surgeon:—(1) For purposes of the examination and certification of young person 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.

The Certifying Surgeon shall issue his certificates in Form 6. The foil and counterfoil shall be filled in and left thumb-mark of the person in whose name the certificate is granted shall be taken on them. On being satisfied as to the correctness of the entries made therein and on the fitness of 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 counterfoils shall be kept by the Certifying Surgeon for a period of at least two years after the issue of the certificate.

If a certificate of fitness issued to a young person is lost, on receipt of application for the grant of duplicate, the Certifying Surgeon, after making such inquiries as he deems fit, may grant a duplicate thereof. Such application shall be forwarded through the occupier of the factory where the young person is employed.

(a) ¹[A fee of rupees ten] shall be payable for the issue of every certificate of fitness issued under sub-rule (2) and shall be paid by the occupier.

(6) ²[A fee of rupees two] shall be payable for the issue of every duplicate of a certificate issued under sub-rule (2) and 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

Footnotes:

1. Subs, by G. N. of 1st Aug. 1984, M.G.G., Pt. I-L, Ext.
2. Subs, by G. N. of 1st Aug. 1984, M.G.G. Pt. I-L, Ext.

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 carried on 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 persons are, or are about to be employed in any work which is likely to cause injury to their health.

For the purpose of the examination of persons employed in processes 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.

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 the Health Register in Form 7 which shall be kept by the factory manager and produced to the Certifying Surgeon at each visit.

If the Certifying Surgeon finds as a result of his examination that any person employed in such process 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.

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.

CHAPTER III

Health

Exemptions under sub-section (2) of section 11

19. Cleanliness of walls and ceilings :—(1) Clause (d) of sub-section (1) of section II of the Act shall not apply to the class or description of the 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 other effective means,—

(i) as respect factories or parts of factories specified in Part A of the said Schedule, to work-rooms in which amount of cubic space allowed for every person employed in the room is less than 15 cu. metres;

(ii) as respects factories or parts of factories specified in Part B of the said Schedule, to work-rooms in which the amount of cubic space allowed for every person employed in the room is less than 15cu. metres;

(iii) to engine-houses, fitting-shops, lunch-rooms, canteens, shelters, crèches, cloak rooms, rest rooms and wash-places; and

(iv) to such parts of walls, sides and tops of passages and staircases as are less than six metres above the floor stair.

(2) If it appears to the Chief Inspector that any part of a factory, to which by virtue of sub-rule (1) any of the provisions of the said clause (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 white-wash or colour-wash, wash paint or varnish the same and in the event of the occupier failing to comply with such requisition within two months from the date of the notice, sub-rule (1) shall cease to apply to such part of factory, unless the Chief Inspector otherwise determines.

SCHEDULE

PART A

Blast furnaces.

Brick and tile works in which unglazed bricks or tiles are made.

Cement works.

Chemical works.

Copper mills.

Gas works.

Iron and steel mills.

Stone, slate and marble works.

The followings parts of factories:-

Rooms used only for the storage of articles.

Rooms in which the walls or ceiling consist of galvanised iron, glazed bricks, glass, slate, asbestos, bamboo, thatch.

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

Parts in which pitch, tar or like material is manufactured or is used to a substantial extent, .except in brush works. The parts of a glass factory known as the glass house. Rooms in which graphite is manufactured or is used to a substantial extent in any process.

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

Parts of walls, particulars, ceilings or tops of rooms which are at least seven meters above the floor.

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

Inside walls of oil mills below a height of 1.5 metres from the ground floor level. Inside walls in tanneries below a height of 1.5 metres' from the ground floor level where a wet process is carried on.

PART

B

Coach and motor body works

Foundries other than foundries in which brass casting is carried on

Electric generating or transforming stations.

Engineering works.

Gur Factories.

Factories in which sugar is refined or manufactured.

Ship-building works.

Those parts of factories where unpainted or unvarnished wood is manufactured.

Register prescribed under sub-section (1) of section 11

20. Record of white-washing, etc:—The record of dates on which white-washing, colour-washing, varnishing, etc. are carried but shall be entered in a Register maintained in Form 8.

Rule prescribed under sub-section (1) of section. 11 and section 12

21. Compound to be kept clean:—The compound surrounding every factory shall be maintained in a sanitary and clean condition free of rubbish, filth or debris.

Rule prescribed under sub-section (2) of section 12

22. Disposal of trade waste and effluents :—(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 the Local Authority.

¹[(2) " For the areas notified under Water (Prevention and Control of Pollution) Act, (6 of 1974) necessary approval to arrangements made for the treatment and disposal of all types of trade-waste and effluents shall be obtained from Maharashtra Water (Prevention and Control of Pollution) Board, constituted under that Act. }

In the case of factories other than, those mentioned in sub-rule

(1) prior approval of the arrangements made for the disposal of trade-wastes and, effluents shall be obtained from the Health Officer.

Rule 22-A prescribed under sub-section (2) of section 13

²[**22-A. Ventilation and temperature:—**(1) Limits of temperature and air movement.—In any factory the maximum wet-bulb temperature of air in a work-room at a height of 1.5 metres above the floor level shall not exceed 30°C 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 more than that shown in the Schedule hereto, or as regards a dry-bulb reading intermediate between the two dry-bulb readings, that specified in relation to the higher of these two dry bulb readings :

SCHEDULE

Dry bulb temperature	Wet bulb temperature
30°C to 34°C	29°C
35°C to 39°C	28.5°C
40°C to 44°C	28°C
45°C to 47°C	27.5°C

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

Footnotes:

1. Ins. and renumbered by G. N. dt. 8-2-1988
2. Ins. by G. N. dt. 31-7-1984

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 27°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 (ii) of sub-section (i) 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 the rule:

Provided also that the Chief Inspector, having due regards 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 requirements; subject to such conditions as he may specify;

(2) Provision of thermometers :—(a) If it appears to the inspector that in any factory, the temperature of air in a work-room is sufficiently high and is likely to. exceed the limits prescribed in sub-rule (1), he may serve on the factory manager an order in writing requiring him to provide sufficient number of whirling hygrometers or any other type of hygrometers and direct that the dry bulb and wet-bulb reading in each such work-room shall be recorded at such positions and at such intervals, as approved by the inspector, by a person specially 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 work-room by radiation from walls, roof or other surroundings, he may serve on the factory manager an order requiring him to provide one or more globe thermometers referred to in the first proviso in sub-rule (1) and further requiring him to place the globe thermometers at places specified by him and keep a record of the temperature in a register showing the spots, the timings and the temperature observed.

(3) (a) In every factory the number of ventilation openings in the work-room below the eaves shall, except where mechanical means of ventilation as required by sub-clause (b) below are provided be of an aggregate area of not less than 15 per cent of the floor area and so located as to afford a continued supply of fresh air :

Provided that out of this total ventilation area, ventilation opening equivalent to at least 10 per cent of the floor area shall, be located at not more than one meters sill level height from the floor level:

Provided further that the Chief Inspector may relax the requirements regarding the amount of ventilation openings if he is satisfied that having regard to the location of the factory, orientation of the work-room, prevailing winds, roof height and nature of manufacturing process carried on, sufficient supply of fresh air into the work-room is afforded during most of the working time :

Provided also that this requirement shall not apply in respect of work-rooms of factories which are covered by section 15 of the Act, or in which temperature and humidity are controlled by refrigeration or air conditioning or both.

Where in any factory due to special circumstances such as situation with respect to adjacent building or internal obstructions like partitions etc. the height of the building or floor space, the requirements of ventilation openings under clause .(a) cannot be complied with for any work-room or where the span of work-room, having necessary ventilation opening exceeds 18 metres or, where any work place is at a distance exceeding 9 metres from a ventilation opening at working level or in the opinion of the Inspector the temperature of air in a work-room is sufficiently high and is likely to exceed the limits prescribed in sub-rule (1), additional ventilation by mechanical means shall be provided.

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

In 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°C and simultaneous wet bulb temperature are 25°C or below and in the opinion of the Inspector the manufacturing process carried on in the work-room of factory permits thermal environments with relative humidity of 5 per cent or more, the Inspector "may serve on the factory manager 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.]

Rules 23 to 33 prescribed under sub-section (1) of section 15

23. When artificial humidification not allowed:—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 85 degrees;

(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 time; 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 or of these two dry bulb readings :

Schedule

Dry bulb	Wet bulb	Dry bulb	Wet bulb	Dry bulb	Wet bulb
60.0	58.0	77.0	75.0	94.0	86.0
61.0	59.0	78.0	76.0	95.0	87.0
62.0	60.0	79.0	77.0	96.0	87.5
63.0	61.0	80.0	78.0	97.0	88.0
64.0	62.0	81.0	79.0	98.0	88.5
65.0	63.0	82.0	80.0	99.0	89.0
66.0	64.0	83.0	80.5	100.0	89.5
67.0	65.0	84.0	81.0	101.0	90.0
68.0	66.0	85.0	82.0	102.0	90.2
69.0	67.0	86.2	82.5	103.0	90.5
70.0	68.0	87.0	83.0	104.0	90.5
71.0	69.0	88.0	83.5	105.0	91.0
72.0	70.0	89.0	84.0	106.0	91.0
73.0	71.0	90.0	84.5	107.0	91.5
74.0	72.0	91.0	85.0	108.0	91.5
75.0	73.0	92.0	85.5	109.0	92.0
76.0	74.0	93.0	86.0	110.0	92.0

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 3.5 degrees.

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

(a) Weaving department:—One hygrometer for departments with less than 500 looms, and one additional hygrometer for every 500 or part of 500 looms, in excess of 500.

(b) Other departments:—One hygrometer for each room of less than 8,500 cu. meters capacity and one extra hygrometer for each 5,600 cu. meters or part thereof, in excess of this.

(c) One additional 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.

25. Exemption from maintenance of hygrometer:—When the inspector is satisfied that the limits of humidity allowed by the Schedule to rule 23 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.

26. Copy of Schedule to rule 23 to be, affixed near every hygrometer:—A legible copy of the schedule to rule 23 shall be affixed near each hygrometer.

27. Temperature to be recorded at each hygrometer:—At each hygrometer maintained in accordance with rule 24; correct wet and Except intervals for rest, by competent persons nominated by the manager and approved by the Inspector. The temperature shall be taken between 7 a.m/p.m. and 9 a.m/7p.m. between 11 a.m/p.m. and 2 p.m/7a.m. and between 4 p.m/7a.m. and 5.30 p.m/a.m. if the factory is working during these hours. In exceptional circumstances such additional readings and between such hours, as the inspector may specify, shall be taken. The temperatures shall be entered in a Humidity Register in Form 9 maintained in the factory. At the end of each month, the persons who have taken the readings, shall sign the Register and certify the correctness of the entries. The Register shall always be available for inspection by the inspector.

28. Specifications of hygrometer :—(2) Each hygrometer shall comprise two mercurial thermometers of wet bulb and dry bulb of similar construction and equal in dimensions, scale and divisional 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 dipping 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 75 mms. from the dry bulb or less than 25 mms. from free 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 of 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 cms.

(6) Each thermometer shall be graduated so that accurate readings may be taken between 50 and 120 degrees.

(7) Every degree from 50 degrees up to 120 degrees shall be clearly marked by horizontal lines on the stem, each fifth and tenth degree shall be marked by longer marks than the intermediate degrees and the temperature marked opposite each tenth degree, i.e. 50, 60, 70, 80, 90, 100, 110 and 120.

(8) The markings as above shall be accurate, that is to say, at no temperature between 50 and 120 degrees shall the indicated readings be in error by more than two hundredths 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, London or some Competent Authority appointed by the Chief Inspector and such certificate shall be attached to the Humidity Register.

29. Thermometers to be maintained in efficient order:—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 tube 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 mills in certain localities—

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

30. An 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 re-examined as prescribed and fresh certificate obtained which certificate shall be kept attached to the Humidity Register.

31. 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 therefrom by wood or other non-

conducting material at least half an inch in thickness and distant at least one inch from the bulb of each thermometer.

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

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

33. How to introduce steam for humidification:—In any room-in which steam pipes are used for the introduction of steam for the purposes of artificial humidification of the air the following provision shall apply:—

(a) The diameter of such pipes shall not exceed 5 mm. and in the case of pipes installed after 1st day of January 1950 the diameter shall not exceed 25mm.

(b) Such pipes shall be as short as is reasonably practicable.

All hangers supporting such pipes shall be separated from the bare pipes by an efficient insulator not less than 15 mm. in thickness.

No uncovered jet from such pipes shall project more than 100 mm. beyond the outer surface of any cover.

The steam pressure shall be as low as practicable and shall not exceed 5 kgs. per square centimetre..

The pipes 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. Rules 34 to 38 prescribed under sub-section (4) of section 17

'[Rules 34]

²[35. Standards of lighting of factories:—(i) In every factory, where natural lighting is not such that day light conditions are fairly uniform over the working or other areas and/or daylight illumination is not sufficient, additional lighting, which shall be of uniform level, widely distributed to avoid hard shadows or strong contrast and free from direct or reflected glare, shall be provided. The minimum intensity of illumination for the different areas and work-rooms of the type given under column No. 2 shall be as given under column No. 3 of the Schedule 'A' appended hereto;

(ii) Notwithstanding the above, in every factory, where intense local lighting is farther necessary on account of the nature of work as mentioned in the column No. 2 of the Schedule ' B' appended hereto, the same shall be obtained by a combination of general lighting and supplementary lighting at the point of work. The minimum intensity of illumination for different tasks shall be as given under column No. 4 of the said-schedule.

Footnotes:

1. Rule 34 del. by G. N. dt. 29-5-1976.
2. Rule 35 subs. by ibid dt. 2&-5-1976. RA
4069—3a

(iii) In case of any doubt or dispute in regard to the classification of areas or tasks specifically mentioned in Schedule 'A' or corresponding to the examples mentioned in Schedule 'B' respectively, the decision of the Chief Inspector of Factories shall be final.

(iv) In regard to cotton ginning factories, where the electric power is not available and when additional lighting for the interior of the factory is necessary, the same shall be provided by candles placed in glass lanterns of a pattern approved by the Inspector and at the rate of not less than one such lantern for every two gins.

Schedule 'A'

Sr. No	Area and Workroom	Minimum intensity of illumination in Lux
1.	Stock-yards, main entrance and exit roads, cat-walks of outdoor plants, coal unloading and storage areas.	20
2.	Passage-ways, and corridors and stairways, warehouses, stock-rooms for large and bulky materials, plat-forms of outdoor plants, base ments.	50
3.	Engine and boiler rooms, passengers and freight elevators, conveyer creting and boxing departments, store-rooms and stock-rooms rooms, toilet and washrooms.	100

Schedule 'B'

Sr No.	Name of work	Example	Minimum intensity Of illumination in Lux
(1)	(2)	(3)	(4)
1.	Where discrimination of detail is not essential,	Handling of material of coarse nature, rough sorting, grinding of clay products, handling coal or ashes.	50
2.	Where slight discrimination of detail is essential.	Production of semi-finished iron and steel produts rough assern- bling, railing of grains, opening, carding, drawing, siubbing, roving, spinning (ordinary) counts of cottons.	100
3.	Where moderate discrimination of detail is essential,	Medium assembling, rough bench work and machine work, inspection and testing of products, canning, sawing, veneration planning of lumber, sewing of light coloured	200

Schedule ' B '—contd.

(1)	(2)	(3)	(4)
		textiles and leather products, weaving light thread, warping, slashing doubling (fancy) spinning fine counts.	
4.	Where close discrimination of detail is essential.	Medium bench and machine work 300 fine testing, flour grading, leather finishing, weaving cotton goods, or light coloured woollen goods, welding sub-assembly, drilling, rivetting, book-binding and folding.	300
5.	Where discrimination of fine detail is involved under a fair degree of contrast for long periods of time.	Fine assembling, fine bench and machine work, fine inspection, fine polishing and bevelling of glass, fine wood working, weaving dark coloured woollen goods,	500
6.	Where discrimination of extremely fine detail is involved under conditions of extremely poor contrast for long periods of time,	Extra fine assembling, extra fine inspection, testing of extra fine instruments, jewellery and watch manufacturing, grading and working of tobacco products, dark cloth hand tailoring, final perching in dye works, make-up and proof reading in printing plants.	1000

36. Prevention of glare:—(1) Where any source of artificial light in the factory is less than five metres 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.

(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 therefrom.

37. 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 35 and 36] is inappropriate or is not reasonable 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.

Footnotes:

1. Subs. by G. N. dt. 29 May 1976.

¹[**38. Exemption from rule 35:**—Nothing in rule 35 shall apply to the parts of factories specified in the schedule annexed hereto.

SCHEDULE

Part of factories in which light sensitive photographic materials are made or use in an exposed condition or where such exposing operations are carried on]

Rules 39 to 44 prescribed under sub-section (1) of section 13

39. Quantity of drinking water:—The quantity of drinking water to be provided for the workers in every factory shall be at least five litres a day per worker employed in the factory and such drinking water shall be readily available at all times during working hours.

40. Source of supply:—The water provided for drinking shall be supplied.

(a) from the taps connected with a public water supply system, or

(b) from any other source approved in writing by the Health Officer.

41. Storage of water:—If drinking water is not supplied from taps connected with a public water supply system which is continuous, such water shall be kept in suitable vessels with taps and dust-proof cover, placed on raised platforms in the shade with drains to carry away the waste water. Such vessels shall always be kept scrupulously clean and the water renewed at least once every day, where the water is drawn from the tube-wells, such water may be drawn in vessels direct from supply taps].

42. Cleanliness of wells 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 sterilised once a week or more frequently if the Inspector by written order so requires, and the date on which sterilising 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 before it is supplied for consumption.

43. Report from Health Officer:—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 as to the fitness for human consumption of the water supplied to the works and in every case to submit to the Inspector copy of such report as soon as it is received from the Health Officer.

Footnotes:

1. Subs. by G. N. dt. 29 May 1976.

44. Water centres:—In every factory wherein more than 250 workers are ordinarily employed.—

(a) the drinking water supplied to the workers shall from the 1st of March to 30th of November 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 whole some and shall be obtained only from a source approved in writing by the Health Officer;

(b) (i) the cooled drinking water shall be supplied in every canteen, lunch room and rest-room and also at conveniently accessible points throughout the factory which for the purpose of these rules shall be called " Water Centres "

(ii) at least one such centre shall be provided on each floor if the factory has more than one floor;

(c) the " Water Centres " shall be sheltered from the weather and adequately drained;

(d) (i) the number of " Water Centres " to be provided shall be one "Water Center" for every 150 workers or part thereof employed at any one time in the factory:

Provided that in the case of a factory where the number of workers employed exceeds 450, it shall be sufficient if there is one " Water Centre " as aforesaid for every 150 workers upto the first 450 and one for every 450 workers or part thereof thereafter, and in counting the number, account shall be taken of the maximum number of workers working at any time during the day;

(ii) where drinking water is provided thorough taps of thorough drinking fountains each "Water Centre" shall have at least three such taps or fountains. The taps or fountains shall be at least 60 cms. apart, and shall have a through to drain away the spilt water. The trough and the walls and platform near the tap shall be laid in glazed tiles:

Provided that where mechanical refrigerating units with drinking water fountains distributed throughout the factory, are provided, the number of " Water Centres " may not be according to the standard prescribed under sub-clause (i) above, as long as the total number of fountains provided is in accordance with the prescribed standard if the number of "Water Centres" as prescribed in sub-clause (i) were provided;

(e) (i) every "Water Centre" shall be maintained in clean and orderly condition;

(ii) every " Water Centre " shall be in charge of a suitable person who shall distribute the water and who shall be provided with clean cloths while on duty:

Provided that in respect of factories where mechanical refrigerating units and taps are provided to the satisfaction of the Chief Inspector, he may exempt such a factory on an application made by the manager from the provisions of sub-clause (ii) on such conditions as he may deem fit.

Rules 44 to 53 prescribed under sub-section (3) of section 19

45. 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 employed exceeds 100, it shall be sufficient if there is one latrine for 25 males upto the first 100 and one for every 50 thereafter.

In calculating the number of latrines 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 and the number of workers to be considered shall be the maximum number employed at any time during the day.

46. Privacy of latrines:—Every latrine shall be under cover and so partitioned off as to secure privacy, and shall have a proper door and fastening.

47. Sign-boards to be displayed:—Where workers of both sexes are employed, there shall be displayed outside each latrine block a notice in file language understood by the majority of the workers " For Men Only " or " For women Only ", as the case may be. The notice shall also bear the figure of a man or of a woman, as the case may be.

48. Urinal accommodation:—There shall be at least one urinal for every 50 male workers or part thereof employed at a time; provided that where the number of males employed exceeds 500 it shall be sufficient if there is one urinal for every 50 males up to the first 500 and one for every 100 or part thereof thereafter.

149. Drainage system for latrines and urinals:—Latrines and urinals shall either be of flush type or aqua-privy type and connected with an underground sewerage system as prescribed under rule 50 or connected to an efficient system of septic tanks:

Provided that, in respect of existing factories having any other type of latrines and urinals, the State Government, or the Chief Inspector of Factories, subject to the control of the State Government, may permit their continued use for a limited period which may be extended by him at his discretion on such conditions as the Government or the Chief Inspector may think fit];

2[50. Certain latrines and urinals to be connected to sewerage system:—Where any general system of underground sewerage with an assured water supply for any locality is provided by a local authority all latrines and urinals of a factory situated in such locality shall be connected with that sewerage system.]

Footnotes:

1. Sub. by G. N. dt. 17th April 1975.
2. Sub. by G. N. dt. 17th April 1975.

51. White-washing, colour-washing of latrines and urinals:—The walls, ceiling and partition of every latrine and urinal shall be white washed or colour washed and the white-washing or colour-washing shall be repeated at least once in every period of four months. The dates on which the white-washing or colour-washing is carried out shall be entered in the prescribed Register in Form 8:

Provided that this rule shall not apply to latrines and urinals, the walls, ceilings or partitions of which are laid in glazed tiles or otherwise finished to provide a smooth, polished pervious surface and that they are washed with suitable detergents and disinfectants at least once in every period of four months.

52. 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.

53. Water taps in latrines:—Water taps, conveniently accessible, shall be provided in or near such latrine accommodation. There shall be a least one tap for every ten latrines or part thereof. The water taps shall be connected to the Municipal water supply or to an overhead storage tank of sufficient capacity, so that water is available from the taps during all hours when the workers are in the factory.

¹ **[53A. Number of Sweepers: -** In every factory employing number of workers in any shift as shown in column No. 2 of the Schedule appended hereto, there shall be employed at least a number of full time/part time sweepers as shown in column No. 3 of the said schedule in the respective shift to clean the latrines, urinals and wash palces 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

Sr. No.	No. of workers in the shift	No. of sweepers to be employed in the shift
1	Upto 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 not above 1000	3 full time
5	Above 1000	3 full time plus one time for every additional 500 or part thereof].
Rules 54 to 56 prescribed under sub-section (2) of section 20		

Footnotes:

1. Ins. by G. N. dt. 29th May 1976.

54. Number and location of spittoons:—The number and location of the spittoons to be provided shall be to the satisfaction of the Inspector. Such spittoons shall be placed on a stand or a bracket 90 centimeters high.

55. Type of Spittoons:—The spittoons shall be of either 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 container; or

(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.

56. Cleaning of Spittoons:—The spittoons mentioned in clause (a) of rule 55 shall be emptied, cleaned and disinfected at least once every day; a spittoon mentioned in clause (b) of rule 55 shall be cleaned by scrapping out the top layer of sand as often as necessary or at least once every day.

Chapter IV

Safety

Further precautions prescribed under subsection (2) of section 21

57. Further safety precautions:—Without prejudice to the provisions of sub-section (1) of section 21 in regard to the fencing of machined, the further precautions specified in the schedules annexed hereto, shall apply to the machines noted in each schedule.

Schedule I

Textile including Cotton, Silk, Asbestos, Staple Fibre or any Artificial Fiber and Jute

1. All openers, scutchers, combined openers and scutchers, lap machines hard waste breakers, cleaners, blenders, hopper feeders and similar machines:—

(a) All Openers, Scutchers, Combined Openers and scutchers, Scutcher Lap machines, Hard Waste Breakers, Cleaners, Blenders, Hopper Feeders and similar machines shall be driven by separate motors or from separate counter shafts provided with the fast and loose pulleys and efficient belt shifting devices.

(b) In all openers, scutchers, combined openers and scutchers, Scutcher lap machines, Hard Waste Breakers, Cleaners, Blenders, Hopper Feeders and similar machine, the beater covers and doors which give access to any dangerous part of the machines, shall be fitted with effective interlocking arrangements, which shall prevent the covers and doors being opened till the dangerous parts of the machine come to rest and also prevent the machine being restarted till the covers and doors are closed.

(c) In all openers, scutchers, combined openers and scutchers, scutcher lap machines, Hard waste breakers, cleaners, blenders, hoppers, feeders and similar machins, the opening giving access to

Footnotes:

1. Rule 57 and the Schedules 1 to IX by G. N. dt. 28th September 1976.

the dust chamber shall be provided with permanently fixed fencing, which shall, while admitting light, yet prevent contact between any part of a person's body and the beater grid bars.

(d) In all openers, scutchers, combined openers and scutchers, scutcher and lap machines, silver lap machines, derby doublers, ribbon lap and similar machines, the lap forming rollers shall be fitted with a guard or cover which shall prevent access to the intake of the lap roller as long as long as the weighted rock is down or the guard or cover shall be so interlocked that it cannot be raised until the machine is stopped and the machine cannot be restarted until the guard or cover is closed:

Provided that in case of similar machines run at higher speed and provided with an automatic lap starter mechanism, the machines shall be immediately put out of use, no sooner this mechanism goes out of order for any reason and the same shall not be recommissioned till the automatic mechanism is repaired and placed back in efficient working order.

2. Carding Machines:—All cylinder doors shall be secured by an automatic locking device which shall prevent the door being opened until the cylinder, cylinders ceased to revolve and shall render it impossible to restart the machine, until the door is closed.

¹[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 prescribed in this behalf as required in sub-section (1) of section 22.]

(b) Access to the licker-in cylinder from the back and the sides shall be positively prevented so long as the licker-in cylinder is rotating, by suitably designed and placed guards.

3. Drawing Frame:—The gearing for driving the draft rollers on drawing frames shall be effectively guarded by a cover which shall be so interlocked that it cannot be raised until the machine is stopped and the machine cannot be restarted until the cover is closed.

4. Speed Frames:—Headstocks shall be fitted with automatic locking arrangements which shall prevent the doors giving access to the jack box wheels being opened while the machinery is in motion and shall render it impossible to restart the machine until the doors are closed.

5. Combers and similar machines:—(a) the gearing shall be effectively guarded by a cover which shall be so interlocked that it cannot be raised until the machine is stopped and the machine cannot be restarted until the cover is closed.

(b) A fixed guard of a suitable design shall be provided which would prevent access to the draw box rollers in motion.

Footnotes:

1. Ins. by G. N. dt. 20th July 198].

6. Self-acting Mules:—The drive shall be from countershaft which shall be provided with fast and loose pulleys and efficient belt shifting devices.

7. Process House Machinery etc:—(a) In respect of calendering mangles Roller Printing Machine merciring, sooping, steantering, singeing, shrinking, washing and similar Machines, all such machines shall be provided with an efficient nip guard along the whole length on the intake side of each pair of bowls and similar parts, as would prevent access to the point of contact of the rollers or bowls:

Provided that, in the case of those machines in respect of which it is not possible to provide efficient " nip "guards on account of the corrosive action of chemical used in the process or on account of the size of the material passing through the bowls, efficient fixed guards shall be provided on either side of the machines as would positively prevent any access to the point of contact of the rollers or bowls:

Provided further that in respect of rollers or bowls of such machines with ends of lesser diameter, the "nip" guards shall have flattened ends on either side to prevent access between the guard and the roller or bowl ends moving in-

(b) In respect of felt calendering machines or any type, dangerous intake points between moving felt or belt and the central or other guide drums shall be securely fenced from the front and also from the sides, of such intake points as are accessible from working floors or platforms.

8. Shearing and Cropping Machines:-The dangerous moving outer blades shall be provided with an efficient interlock arrangement as would prevent the complete cover or guard to be opened until the cutter blade has come to rest and would also make it impossible to restart the machine until the cover or guard is closed.

9. Singeing Machines:—Effective arrangement such as solenoid valve or other effective device shall be provided to cut off instantaneously supply of any type of gas or of electricity to the machine, in case of failure of power to the machine.

Schedule II

Cotton Ginning Machinery

1. Line Shaft:—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 bare 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 III

Wood Working Machinery

1. Definitions:—For the purposes of this Schedule—

(a) " Wood working machine " means a circular saw, band saw, planning machine, chair mortising machine or vertical spindle moulding machine operating on wood of cork ;

(b) " Circular saw means a circular saw, working in a bench (including a rack bench) but 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 vertical direction but does not include a log saw or band resawing machine; "Planning machine" means a machine for overhead planning or for thickening or for both operations.

2. Stopping and starting device:—An efficient stopping and starting device shall be provided on every wood-working 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.

3. Space around machine:—The space surrounding every wood working machine in motion shall be kept free from obstruction.

4. Floor.—The floor surrounding every wood-working 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 material.

5. Training and supervision :—(1) No person shall be employed at a wood-working machine unless he has been sufficiently trained to work that class of machine or unless he works under the adequate supervision of a person who has a through knowledge of the working of the machine.

(2) A person who is being trained to work a wood-working machine shall be fully and carefully instructed to the danger of the machine and the precautions to be observed to secure safe working of the machine.

6. Circular saw:—Every circular saw shall be fenced as follows:—
(a) Behind and in direct line with the saw there shall be an arriving knife, which shall have a smooth surface, shall be strong, rigid and easily adjustable, and shall also conform in the following conditions:—

(i) The edge of the knife nearer the saw shall form an area of a circle 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 at 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 10 mms.

(iii) For a saw having diameter of less than 60 cms., the knife shall extend upwards from the bench table to within 25 mms. of the top of the saw, and for a saw having a diameter of 60 cms. or over shall extend upwards from the bench table to a height of at least 22.5 cms.

(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 arriving knife to a point as low as practicable at the cutting edge of the saw.

(c) The part of the saw below the bench table shall be protected by two plates of metal or other suitable materials one on each side of the saw, Such plate shall not be more than fifteen centimeters apart and shall extend from the axis of the saw outwards to a distance of not less than five cms. beyond the teeth of the saw. Metal plates, if not beaded, shall be of a thickness of at least 2.5 mms. or if beaded be of a thickness of at least 1.25 mms.

7. 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.

8. 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.

(c) All portions of the blade shall be enclosed or otherwise securely guarded except the portion of the blades between the bench table and the top guide.

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

Every planning machine used for overhead 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.

The feed roller of every planning machine used for thickening except the combined machine for overhead planning and thickening shall be provided with efficient guard.

10. Vertical Spindle Moulding Machine: - (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 workers.

11. Chain Mortising Machine:—The chain of every chain mortising machine shall be provided with a guard which shall enclose the cutter as far as practicable.

12. Adjustment and maintenance of guards.—The guards and other appliances required under this Schedule shall be—

(a) maintained in an efficient state,

(b) constantly kept in position while the machinery is in motion, and

(c) so adjusted as to enable the work to be done without risk.

Schedule IV

Rubber and Plastic Mills

1. Definitions:—(x) A "Rubber and Plastic Mills" shall mean machine with rollers used in breaking down, cracking, washing, grating, mixing, refining and warming of rubber or rubber goods and plastic or plastic goods.

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

1. Installation of machines.—Rubber and plastic mills shall be so installed that top of the front roll is not less than one meter above the floor or working level provided that in existing installations where the top of the front roll is below this height a strong rigid distance bar guard shall fitted across the front of the machine in such position that the operator cannot reach the nip of the roller from the normal working position of the operator.

2. Safety Devices :—(i) 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

Horizontal Safety:—Trip rods or light wire cable across both front and rear which will when pushed or pulled operate instantly to disconnect the power and apply the brakes or to reverse the rolls. Safety-trip rods or tight wire cable on rubber mills shall extend across the entire length of the face of the rolls and shall be located not more than 170 centimetres above the floor or working level.

(ii) Calender machines shall be equipped with:—

(a) Horizontal safety-trip rods or tight wire across both front and rear, which will when pushed or pulled operate instantly to 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 centimeters above the floor or working level;

(c) on each side of all calenders 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 centimeters of the floor. These cables should be positioned at a distance of not more than 30 centimeters from the face of the roll and a distance of not less than 25 millimeters from the calender frame.

3. Maintenance and safety devices:—Safety trip rods and tight wire cables on all rubber mills and calenders 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. Injunction 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, 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 tall 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 interlocked 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 V

Centrifugal Machines

1. Definitions:—"Centrifugal Machine" includes centrifugal extractors, or droextractors, separators and driers.

2. Centrifugal machines shall be provided with efficient interlocking devices that will physically prevent the lids from being opened whilst the rotating drums or brackets are in motion under power or due to power derived earlier and by then switched off and would also prevent the starting of the drums or baskets under power while the lids are open.

3. Centrifugal machines shall not be operated at a speed in excess of the manufacturer's rating which shall be legibly stumped by the manufacturer both on the inside of the bracket and on the outside of the machine casing at easily-visible places.

4. All centrifugal machines shall be provided with effective braking arrangements, to bring cage, drum or basket to rest within a reasonable short period of time, after the power to drive the motor is cut off.

5. The cages, drums or baskets shall be thoroughly examined by a competent person regularly to check their balance and effective steps shall be taken in case unbalance at high speed is observed to restore their balance before recommissioning the machines:

Provided that clauses 2, 3 and 4 shall not apply in case of top lung similar machines used in the sugar manufacturing industry.

Schedule VI

[Shears, Slitters and Guillotine Machines]

1. Definitions:—The term shears, slitters and guillotine means a machine, whether driven by power or otherwise, equipped with a straight beveled blade operating vertically against a resisting edge and used for shearing metals or non-metallic substances.

2. A barrier metal guard of adequate strength shall be provide 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 automatic device which will remove both the hands of the operator from the danger zone at every descent of the blade.

3. 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.

²[4. Slitting Machines:—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.

1. Slitting Machines:—Circular disc-type knives on machines for cutting metal, leather, paper, rubber, textiles or' non-metallic

Footnotes:

1. Subs. by M.M.G., Pt I-L Ext., dt. 10-8-1989

2. Added by M.M.G., Pt I-L Ext, dt. 10-8-1989

substances shall, 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 6 mm. (1/4 inch) at any time.

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

5. Index, Cutters and Vertical Paper Slotters:—Index cutters and other machines for cutting strips from the ends of books, and for similar operations, shall be provided with fixed guards, so arranged that the fingers of the operators cannot come between the blades and the tables.

6. 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.

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

Schedule VII

Agitators and Mixing Machines

1. Definitions:—" Agitators and Mixing Machines " mean.' 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 top lid, to prevent access to the agitating stirring or similar devices, whilst in motion 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 the operator's body coming in contact with agitator stirring or similar devices whilst in motion.

5. When discharge holes, openings chutes or similar arrangements are provided at the bottom or at the sides of the container vessels of the agitator and mixing machines, they shall be so designed, shaped, guarded or situated 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 VIII

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 IX

General

1. In all machinery driven by power and installed in any factory after commencement of this rule, all complings with projecting bolt

heads and similar projections shall be completely encased or otherwise, effectively guarded so as to prevent danger,

**Rules prescribed under sub-section (1) of section 22
and section 112**

58. Register of specially trained adult workers:—Register of workers attending to machinery as provided in sub-section (1) of section 22 shall be in Form 10.

59. Tight fitting clothing:—A worker required to wear tight fitting clothing under sub-section (I) 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.

Rules prescribed under section 41

60. Belts, etc., to be regularly examined:—All belts shall be regularly examined to ensure that joints are safe and the belts are at proper tension.

Rules prescribed under sub-section (2) of section 23

61. Employment of young persons on dangerous machines:—
¹ [The machines specified in sections 28, 29 and 30 and the following machines] shall be deemed to be of such dangerous character that young persons shall not work at them unless the provisions of section 23 (2) are complied with—

- Power presses other than hydraulic presses;
- Milling machines used in the metal trades;
- Guillotine machines;
- Circular saws;
- Platen Printing machines.

²**[61-A. Further provisions regarding safeguard:—**Without prejudice to the provisions of sub-section (1) of section 21 and sub-section (2) of section 26, in regard to the fencing of machines and

Footnotes:

1. Subs by G. N. dt. 26-4-1977
2. Ins. by G. N. of dt. 28-9-1976

provisions of safeguards the following further safeguards shall be provided in all machinery specified in this rule installed in any factory after the commencement of application of this rule :—

(1) Safeguards and safety devices prescribed in clauses 1(6), 1(c), 1(d), 2(a), 2(6), 3,4,5(a) and 5(6), 7(a), 7(6) 8 and 9 in respect of machines referred to in Schedule I to rule 57.

(2) Safeguards and safety devices prescribed in clauses 6, 8, 9, 10 and 11 in respect of machines referred to in Schedule III (Wood Working Machinery) to rule 57.

(3) Safeguards and safety devices prescribed in clauses 2 and 4 in respect of machines referred to in Schedule IV (Rubber and Plastic Mills) to rule 57.

(4) Safeguards and safety devices prescribed in clauses 2, 3, 4 in respect of machines referred to in Schedule V (Centrifugal Machine) to rule 57.

(5) Safeguards and safety devices prescribed in clauses 2 and 3 in respect of machines referred to in Schedule VI (Shears and Guillotine Machines) to rule 57.

(6) Safeguards and safety devices prescribed in Clauses 3, 4 and 5 in respect of machines referred to in Schedule VII (Agitators and Mixing Machines) to rule 57.

(7) Safeguards and safety devices prescribed in clause 1 in respect of machines referred to in Schedule VIII (Leather, Plastic and Rubber, Stripper Machines) to rule 57.]

Rules prescribed under sub-section (8) of section 28

62. Hoist examination-particulars of:—A Register shall be maintained to record particulars of examinations of hoists or lifts and shall give particulars as shown in Form 11.

Examination under sub-section (4) of section 28

63. Exemption of Certain hoist and lifts:—In pursuance of the provision of sub-section (4) of section 28, in respect of any class of description of hoist or lift specified in the first column of the following Schedule, the requirement of section 28 specified in the second

column of the said Schedule and set opposite to that class or description or hoist or lift shall not apply:—

Schedule	
I	II
Class or description of hoist or lift. Hoist lifts mainly used for rising materials for changing blast furnaces or lime kilns. Hoists not connected with mechanical power and which are not used for carrying persons.	Requirement which shall not apply sub-section (1) (6) in so far as it requires a gate at the bottom landing; sub-section (1) (d), sub-section (1) (e), Sub-section (1) (b) in so far as it requires the hoistways liftsways enclosure to be so constructed as to prevent any persons or thing from being trapped between any part of the hoist or lift and any fixed structure or moving part; subsection (1) (e).

Rule prescribed under sub-section (2) of section 29

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

(2) A register in Form 12 containing the particulars, therein specified shall be kept of every examination made under sub-rule (1). The Register shall be readily available for inspection.

(3) (a) 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 inclination of the jib or corresponding radii of the load.

(b) A table showing the safe working load 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, in prominent position on the premises and no rope, chain or lifting tackle not shown in the table shall be used in a factory unless in the case of lifting tackle, 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 upto it.

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

(5) All chains and lifting tackle, except a rope sling, shall unless they have been subjected to such other heat treatment as may be approved by the State Government be effectively annealed under the supervision of a competent person at the following intervals, namely:—

(i) All chains, slings, rings, hooks, shackles and swivels used in connection with molten metal slag or when they are made of half inch bar or smaller, atleast once in every six months.

(ii) All other chains, rings, hooks, shackles and swivels in general use at least once in every twelve months : Provided that chains and lifting tackle not in frequent use shall, subject to the approval of the Chief Inspector of Factories, be annealed only when necessary and particulars of such annealing shall be entered in a register in Form 12.

(6) Nothing in sub-rule (5) shall apply to the following chains of claim and lifting tackle, namely:—

(i) Chains made of malleable cast iron.

(ii) Plate link Chains.

(iii) Chains rings, hooks, shackles and swivels made of steel or of any non-ferrous metal.

(iv) Pitched chains, working on sprocket or pocketed wheels.

(v) Rings, hooks, shackles and swivels permanently attached to pitched chains-pulleys, blocks or weighing machines.

(vi) hooks and swivels having screw threaded parts or ball bearing or other case hardened parts.

(vii) Socket shackles screwed to wire ropes by white metal capping.

(viii) Bordeaux connections.

(ix) Any chain or lifting tackle which has been subjected to the heat treatment known as "normalising" instead of annealing. Such chain and lifting tackle shall be thoroughly examined by a competent person at least once in every twelve months and particulars of such examination shall be entered in the register in Form 12.

(7) All lifting machines, Chains, ropes and lifting tackle except a fibre rope or fibre rope sling, which have been lengthened, altered or paired by welding or otherwise, shall not be used again, unless it is adequately tested and examined by competent person and certified in writing by him to be in order.

(8) No person under 18 years of age and no person who is not sufficiently trained in the working of lifting machines and acquainted with the hazards of the machine shall be employed as driver of lifting machine. Whether driven by mechanical power or otherwise, or to give signals to a driver.

]Rule prescribed under sub-section (2) of section 31 and section 112

¹[65. Safety pleasures for pressure and plant and vessels operated under pressure over atmospheric pressure :—(1) In this rule,—

'competent person' means person who is, in the opinion of the Chief Inspector capable by virtue of his qualifications, 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;

'maker' means any person in whose name the pressure plant or pressure vessel is either manufactured under a patent or sold;

Footnotes:

1. Subs by G.N. dt, 28-5-1982, published-in M.G.G., Pt. I-L,

(c) 'pressure plants' means the pressure vessel along with its pipings and other fittings operated at a pressure greater than the atmospheric pressure;

(d) 'pressure vessel' means any vessel subjected to or operated at a pressure greater than the atmospheric pressure.

(2) Every pressure plant or pressure vessel used in any factory shall be:—

(a) properly designed on sound engineering practice;

(b) of sound construction and material and of adequate strength and shall be free from any defect; and

(c) properly maintained in a safe working condition:

Provided that where there is an Indian Standard or a standard of the country of manufacture in respect of any pressure plant or pressure vessel or where the design of construction of any such pressure plant or pressure vessel has been regulated by any other law or regulation in force, it 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 maker or from competent person.

(3) (i) Every pressure plant, or pressure vessel shall be fitted with—

(a) a suitable safety valve or other effective device, conveniently located to ensure that the maximum safe working pressure of the vessel shall not be exceeded at any time;

(b) a suitable pressure gauge with a dial range not less than 1.5 times and not exceeding twice the maximum safe working pressure, easily visible and designed to show, at all times, the correct internal pressure in kilograms per square centimetre and marked with prominent red mark at the maximum safe working pressure of the pressure plant or pressure vessel;

(c) a suitable stop valve or valves by which the pressure vessel or the system of pressure vessels may be isolated from other vessels or source of supply of pressure;

(d) a suitable nipple and globe valve connected for the exclusive purpose of attaching a test pressure gauge for checking the accuracy of the pressure gauge referred to in clause (6) of the sub-rule;

(e) a suitable drain cock or valve or a plug at the lowest part of a pressure vessel so as to ensure effective draining of liquid that may be collected in the pressure vessel.

(ii) Every pressure gauge, stop valve, nipple and globe valve, shall be mounted at a height not more than 1.5 metres from the working level.

(iii) Every pressure plant or pressure vessel not constructed to withstand the maximum possible working pressure at the source of supply or the maximum pressure which can be obtained in the pipe connecting the pressure vessel with any other source of supply shall be fitted with a suitable reducing valve or other suitable automatic device to prevent the safe working pressure of the vessel being exceeded. Suitable pressure gauges shall be provided close to the reducing valve to show the high pressure and reduced pressure.

(iv) In case of a jacketted vessel in which heat is transmitted by means of steam or other media in the jacket causing pressure rise in the vessel, the heat input in the jacket shall be controlled by a suitable device as not to allow the safe working pressure of the vessel being exceeded.

(v) To further protect the pressure vessel in the event of failure of reducing valve or the control device mentioned in clauses (iii) and (iv) an additional safety valve having a capacity to release all steam, vapour or gas without under pressure rise shall be provided in addition to the one referred to in clause (1) (a):

Provided that it shall be sufficient for the purposes of this sub-rule if the safety valve, pressure gauge and stop valve or Other suitable effective device are mounted on a pipe line immediately adjacent to the pressure vessel and where there is a range of two or similar pressure vessels in a plant served by the same pressure load, only one set of such mountings need be fitted provided that those cannot be isolated from any of the pressure plant or pressure vessels.

(4) Every pressure plant in service shall be thoroughly examined by a competent person.

(a) externally in every period of six months;

(b) internally, once in every period of twelve months, and

(c) hydraulic test once in a period of four years.

Explanation:—If however by reason of construction of the pressure vessel or pressure plant a thorough internal examination is not possible, it may be replaced by a hydraulic test, which shall be carried out once in every period of two years:

Provided that in the case of pressure vessel or pressure plant with thin walls such as sizing cylinders made of copper or any other non-ferrous metal, periodic hydraulic test may be dispensed with if the requirements laid down in clause (5) are complied with:

Provided further that if the Chief Inspector or any Inspector authorised by him certifies that it is impracticable to carry out a thorough external or internal examination of any pressure vessel or pressure plant as required by clauses (a) and (b) and if owing to its constructions and use a hydraulic test as required by this sub-rule cannot be carried out, a thorough external examination shall be carried out atleast once in every two years and a thorough systematic non-destructive test like ultrasonic test, for metal thickness or other defects of all parts shall be carried out atleast once in every period of four years.

(5) (a) (i) As far as possible, in respect of every sizing cylinder the shell whereof is made of copper sheet or any other non-ferrous metal and which is put to use before the 31st October 1963 the Manager shall make available to the Inspector and the competent person examining such cylinder, information about the date on which such cylinder was put to use for the first time With full particulars as to the thickness of the shell when so taken into use in the factory for the first time. Information shall also be made available about the working pressure recommended by the makers when the cylinder was put to use for the first time in the factory.

(ii) If no such information is available, any other evidence relevant to show the age of the cylinder shall be submitted by the Manager to the Chief Inspector. The Chief Inspector shall determine the age of the cylinder on such documentary evidence or other oral evidence that may be presented to him by the Manager or any other evidence that may be produced, and the age determined shall be considered as the age of cylinder for the purpose of this rule.

(b) (i) The Minimum thickness of the shell of a sizing cylinder shall be actually measured once in a period of two years.

(ii) If during its working life, the shell of a sizing cylinder is at any time, punctured requiring repairs to the cylinder to close the punctured portion, the thickness of the sheet of the shell near such puncture or opening shall be measured by a competent person.

(c) (i) No sizing cylinder shall be subjected to work at a pressure greater than the maximum safe working-pressure recommended by the makers of such cylinder at the time which such cylinder was first put to use in a factory.

(ii) No sizing cylinder which has been in use for more than five years shall be subjected to work at a pressure greater than the lowest of the most safe working pressure calculated in accordance with the following three methods, namely:—

(a) Same proportion to the original safe working pressure when first put to use as the minimum thickness of the shell material as actually measured at any time bears to the original thickness of the shell material when first put to use.

(b) Calculated on the basis of the minimum thickness actually measured so that the tensile stress in the shell not exceed safe working stress for the material of the shell;

Explanation:—If the shell is made of copper, safe working tensile stress shall be taken to be not more than 350 kilograms per square centimetre.

(c) Reduced at the rate of 4 per cent of the original working pressure for every year of its use after the first five years;

(d) No sizing cylinder shall be continued to be used for more than twenty-five years after it was first put the use:

Provided that the Chief Inspector may authorise the use of sizing cylinders beyond the period of twenty-five years for a period not exceeding five year, if tests are carried out and further details are made available to his satisfaction to indicate that the cylinder can be used with safety,

(6) (i) The maximum safe working pressure and the date of the last examination shall be plainly marked on every pressure vessel or pressure plant and no pressure plant or pressure vessel shall be operated or used at a pressure higher than the maximum safe working pressure.

(ii) No pressure plant or pressure vessel which has been previously used, or has remained isolated or idle for a period exceeding 6 months or which has undergone repairs or alternations shall be used in a factory unless it is examined and tested by a competent person.

(iii) No pressure vesel or pressure plant shall be taken into use for the time in any factory unless,—

(a) A certificate specifying the maximum safe working pressure and the tests to which it was subjected to, is obtained from the maker; and

(b) it is thoroughly examined by a competent person in the premises where it is used;

(c) 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 Form, his observations, findings and conclusions with reasons therefor and other relevant remarks and may authorise the pressure vessel or pressure plant; to be used and kept in operation, subject to a lowering of maximum safe working pressure or to more frequent or special examination or test or subject to both of these conditions.

(d) where the report of any examination under this rule specifies any conditions and suggestions for the working of a pressure plant or pressure vessel the same shall not be used except in accordance with those conditions and suggestions.

(7) (a) The manager shall maintain a register of pressure plant or pressure vessels showing—

(i) Name and make of the pressure plant or pressure vessel,

(ii) Identification mark,

(iii) The date of taking into use for the first time, and

(iv) The reference number and date of the report of examination by competent person.

(b) The report of the result of every examination made shall be completed in Form 13.

(c) The competent person making a 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 safe working pressure is reduced or the examination shows that the part cannot continue to be used with safety unless certain repairs are carried out immediately or within a specified time or where he has specified frequent or special examination or test.

(d) An Inspector may by an order in writing direct the production within the time specified in such order, of a report of examination made by a competent person who shall not be an employee of the factory in which the pressure plant or pressure vessel is in use.

(e) All certificates, reports and registers required to be obtained or maintained under this rule shall be complete in all respects and duly signed by the maker or competent person, and these shall be produced for the perusal of the Inspector.

(8) The Chief Inspector may exempt, subject to such conditions as he may impose any pressure plant/vessel from any of the provisions of this rule if he has reasons to believe that the

construction or use of that plant/vessel is such that the inspection provisions are not practicable provided Indian Standard Institute or any reputed international code on examination procedure of pressure vessels or plants are being followed.

The provisions of this rule shall apply to pressure plants and pressure vessels as defined in sub-rule (2) and shall be in addition to without prejudice to and not in derogation of any other law in force, except the following :—

(a) vessels having an internal operating pressure not exceeding atmospheric pressure be 1 Kg./cm.² or 15 lbs. sq. inches absolute;

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

(c) metal bottles or cylinders used for storage or transport of compressed gases or liquids or dissolved gases under pressure covered by the Gas Cylinder Rules, 1981, framed under the Indian Explosive Act, 1884 (IV of 1884);

(d) vessels in which internal pressure is due solely to the static head of liquids;

(e) working cyclinders/casings of the machineries such as pumping sets compressors and prime moves;

(f) vessels for nuclear energy applications.]

Rule prescribed under sub-section (2) of section 34

¹[**66. Excessive weights:-** (I) In any factory, no person shall, unaided by another person: or mechanical device, lift by hand or carry overhead, or over the back or shoulders, any material, article, tool or appliance exceeding the maximum limit in weight set out in the following Schedule :-

Schedule	
Person	Maximum weight of material article, tool or appliance Kgs.
Adult male	55
Adult female	30
Adolescent male	30
Adolescent female	20
Male Child	16
(f) Female Child	13

Footnotes:

1. Subs, by G.N. dt. 17.4.1975.

(2) In any factory, no person in conjunction with other person, unaided by mechanical device, shall lift by hand or carry overhead or over the back of shoulders, any material, article, tool or appliance if the weight thereof exceeds the sum of weight permissible for each person separately, as fixed by the Schedule to sub-rule (1).]

Rule prescribed under-section 35

67. 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 process specified in Schedule I annexed hereto, being processes which involve risk of injury to the eyes from particulars or fragments thrown off in the course of the process.

(b) The process specified in Schedule II annexed hereto, being processes which involve risk of injury to the eyes by reason of exposure to excessive light, ¹[or infra-red or ultra-violet radiations].

²[Schedule I]

(1) The breaking, cutting, dressing or carving of bricks, stone, concrete, slag or similar materials by means of a hammer, a chisel, pick or similar hand tool, or by means of a portable tool driven by mechanical powers, and the dry grinding of surfaces of any such materials by means of a wheel or disc driven by mechanical powers, where in any of the foregoing cases particles or fragments are liable to be thrown off towards the operator in the course of the process.

(2) The 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) The 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 the process.

(4) The 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.

Footnotes:

1. Subs, by G. N. dt. 19.3.1977,
2. Subs, by G. N. dt. 24.11.1975.

(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) The welding and cutting of metals by means of an electric, oxyacetylene or similar process.

(7) The hot fettling of steel casting by means of a flux injected burner or air torch and the de-seaming of metal.

(8) The fettling of metal castings, involving the removal of metal, including runners, gates and risers and the; removal of any other material during the course of such fettling.

(9) The chipping of metal and the chipping, knocking out, cutting out or cutting off of cold rivets, bolts, nuts, lungs, 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) The chipping or scarfing 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) The breaking of scrap metal by means of a hammer or by means of a tool driven by mechanical power.

(12) The 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) The handling in open vessels or manipulation of strong acid or dangerous corrosive liquids or materials, and the 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 plants or part of the 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.]

¹[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 risk of injury to eyes from exposure to excessive light or ultra-violet or infra-red radiations.]

Rule prescribed under sub-section (6) of section 36

²[68. 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, pipe 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 c. m. 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.]

Footnotes:

1. Subs, by G. N. dt. 19-3-1977.
2. Subs, by G. N. dt 19-3-1977.

Exemption under sub-section (5) of section 37

69. Exemption:-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 gasholder 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: Provided that, this exemption shall not apply to any gasholder containing acetylene or mixture of gases, to which acetylene has been added intentionally;

(ii) Welding shall only be done by the electric welding processes and shall be carried out by experienced operatives under the constant supervision of a competent person. (b) The operations of cutting of welding steel or brought 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, 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 fee 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 operations 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 250° F. (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 centimetres 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.

Rules prescribed under sub-section (1) section 38

70. ¹[Fire Protection:—Every factory shall be provided with adequate means of protection and escape in case of fire without prejudice to the generality of the following:—

(1) Process, equipment, plant etc. 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 of work places separated from one another by walls of fire resistants construction;

Footnotes:

1. Subs, by M.G.G., Ft! I-L., Ext., dt. 10-8-1989,

(c) ventilation ducts, pneumatic conveyors and similar equipment involving a serious fire risk should be provided with flame arresting or automatic fire extinguishing appliances, or fire resisting dampers, electrically inter-locked with bear sensitive/smoke detractors and the air-conditioning plant system;

(d) in all work places having serious fire or flash fire hazards, passages between machines, installations of piles of material should be at least 90cm. wide. For storage piles, the clearance between the ceiling and the tope of the pile should not be less than 2 metres.

2. Access for fire fighting :-(a) Building 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 opening 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 explosives or highly flammable substances are manufactured, used, handled or stored;

(b) storage tanks containing oils, paints or other flammable liquids;

(c) grain elevators;

(d) buildings, tall chimneys or stacks where flammable gases, fumes, dust or lint are likely to be present; and

(e) sub-station buildings and outdoor transformers and switch yards.

4. Precautions against ignition:—Wherever there is danger of fire or explosion from accumulation of flammable or 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.

5. 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 metres away from process or storage buildings.

6. Cylinders containing compressed gas:—Cylinders containing compressed gas may only be stored in open if they are protected against 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.

7. 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, and flammable liquids shall be stored in suitable containers with close fitting covers :

Provided, that not more than 20 lits. of flammable liquids having a flash point of 20C 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 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 basement sumps drains and to confirm any escaping liquid within safe limits.

8. 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.

9. Fire exits :-(a) in this rule—

(i) "horizontal exit" 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 on adjoining part of the same building with adequate separation; and

(ii) " travel distance "means the distance an acepant has to travel to reach an exit

(b) an exit may be a doorway, corridor, passageway to an external stairway or to verandah or to internal stairway segregated from the rest of building by fire resisting walls which shall provide continuous and protected means of egress to the exterior of a building or to an exterior open space. An exist 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 with shall be free of any obstruction. There shall beat least two ways of escape from every room and the exists shall 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.

(e) The exit 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 sources of electric supply;

(f) The exit 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 stairs where tunnel or flue effect may be created including 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) Exit shall be so located that the travel distance to reach at least one of them on the floor shall not exceed 30 metres.

(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 suitably shielded from areas of high hazard.

(l) The unit exit width used to measure capacity of any exit shall be 50 cm. A clear width of 25 cm. shall be counted as additional half unit. Clear width of less than 25 cm. shall not be counted for exit width.

(m) Occupants per unit width shall be 50 for stairs and 75 for doors.

(n) For determining the exit 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.

(o) There shall not be less than two exits serving every floor area above and below the ground floors, and at least one of them shall be an internal enclosed stairway. The two exits shall be as remote from each other as possible, and both exits shall be accessible through separate ways from any point on the floor.

(p) 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 person employed therein, and in any such room wherein more than 10 persons may be normally present at least two separate means of exit shall be available, as remote from each other as practicable.

(q) Every storage area shall have access to at least one means of exit which can be readily opened.

(r) Every exit doorway shall open into an enclosed stairway a horizontal exit or a corridor or passageway providing continuous and protected means of egress.

(s) No exit doorway shall be less than 100 cm. in width; Doorways shall not be less than 200 cm. in height.

(t) 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 than 90 cm. Overhead or sliding door shall not be installed for this purpose.

(u) An exit door shall not open immediately upon a flight of stairs. A landing at least 1.5m. x 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 way it serves.

(v) The exit doorways shall be openable from the side which they serve without the use of a key.

(w) Exit corridors and passageways shall be of a width not less than the aggregate required width of exit doorways leading from there in the direction of travel to the exterior.

(x) Where stairways discharge through corridors and passageways, the height of the corridors and passageways shall not be less than 2.4 metres.

(y) A staircase shall not be arranged round a lift shaft unless the latter is totally enclosed by material having a fire-resistance rating not lower than that of the type of construction x) of the former.

(aa) Hollow combustible construction shall not be permitted

(bb) The minimum width of an internal staircase shall be 100 cm.

(cc) 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.

(dd) The maximum height of a riser shall be 19 cm. and the number of risers shall be limited to 12 per flight.

(ee) Hand rails shall be provided with a minimum height of 100 cm. and shall be firmly supported.

(ff) The width of a horizontal exit shall be same as for the exit doorways.

(gg) The horizontal exit shall be equipped with at least one fire door of self closing type.

(hh) The floor area on the opposite or refuge side of a horizontal exit shall be sufficient to accommodate occupants of the floor area served, allowing not less than 0.3 square meter per person. The refuge 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.

(ii) Where there is difference in level between connected areas for horizontal exit, ramps not more than 1 in 8 slopes shall be provided. For this purpose steps shall not be used.

(jj) Doors in horizontal exits shall be openable at all times.

(kk) Ramps with a slope of not more than 1 in 10 may be substituted for the requirements of staircase. Wherever the use is such as to involve danger of slipping, the ramp shall be surfaced with non-slipping material.

(10) If the Chief Inspector is satisfied in respect of any factory or any part of the factory that owing to the exceptional circumstances such as infrequency of the manufacturing process or, for any other reason, 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 the factory from all or any of the provisions of the rules subject to conditions as he may, by such order, prescribe.]

71. Means of escape for cotton ginning factories:- Notwithstanding anything contained in rule 70 cotton ginning factories shall be provided with at least two suitable earthen lamps or two flights of stairs made of brick-work or other fire-resisting material.

¹**71-A.** * * *

Footnotes:

1. Del. by. G.N. dt.20-7-1981.

171-B. Fire-fighting apparatus and water supply:-(1) In every factory there shall be provided and maintained the following fire-fighting equipments:—

(a) Two fire buckets of not less than 9 litres capacity for every 100 square metres of floor area subject to a minimum of four buckets on each floor.

(b) Every bucket provided under this sub-rule shall—

(i) conform to appropriate Indian Standard Specification.

(ii) be kept in a position approved by the Inspector and shall be used for no other purpose than fire extinguishing, and

(iii) at all times be kept full water but if the principal fire risk arises from inflammable, liquid or other substances where water cannot be used, it shall be kept full of clean fine dry sand, stone dust or other inert material:

Provided that, where the Chief Inspector is of the opinion that other adequate fire-fighting apparatus is 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.

(2) In every factory adequate provision of water-supply for fire fighting shall be made and where the amount of water required in litres per minute is 550 litres or more as calculated from the formula mentioned below, power-driven trailer pumps of adequate capacity shall be provided and maintained :—

$$\text{Water required in litres per minute} = \frac{A + B + C + D}{20}$$

In the above, formula-

A = the total area in square metres of all floors including galleries in all buildings of the factory;

B = the total area in square metres of all floors and galleries including open spaces in which combustible materials are handled or stored;

C = the total area in square metres of all floors over 15 metre above ground level; and

D = the total area in square metres 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 or Fire Insurance Company:

Footnotes:

1. Ins. by G. N. of 5th Sept. 1972.

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 or D are protected by permanent automatic fire-fighting installation approved by any Fire Association or Fire Insurance Company, such areas may, for the purpose of calculation, be halved:

Provided also that, where the factory is situated at not more than 3 kilometres 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 reduced by 25 per cent but no account shall be taken of this reduction calculation water supply required under the sub-rule (6)¹;

(3) Each trailer pump shall be provided with equipment as per Schedule A. Such equipment shall conform to Indian Standard specifications whenever they exist.

(4) Trailer pumps 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 cannot be reached by man hauling of trailer pumps within reasonable time, vehicles with towing attachment shall be provided at the scale of one 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 per cent of this water-supply or 4,50,000 litres which ever is less shall be in the form of static 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 7 kg/sq. cm.

(7) (i) In factories having more than 100 square metres floor area and where fire may occur due to combustible materials other than inflammable liquids, electrical equipment and ignitable metals, soda, acid or equivalent type of portable extinguishers at the rate of one

Footnotes:

1. Subs, by G. N. dated 5th Sept. 1974.

for every 500 sq. metres of area spaced at not more than 30 metres apart subject to a minimum of one extinguisher shall be provided in addition one fire buckets required under sub-rule (1).

(ii) In factories where fires may occur due to inflammable liquids or grease or paint, the extinguishers to be provided at the scale laid down in clause (a) shall consist of foam carbon tetrachloride, dry powder, carbon dioxide, chlorobromethane or other equivalent type, as appropriate. In case of inflammable liquids soluble in water, the extinguishers shall be alcohol type foam.)

(iii) In factories where fires may occur due to electrical equipment, the extinguisher to be provided at the scale laid down in clause (i) shall consist of carbon dioxide, dry powder, carbon tetrachloride or equivalent types.

(iv) In factories where fires may occur due to magnesium, aluminium or zinc dust or shavings or other ignitable metals, the use of liquids, carbon dioxide and foam type extinguishers shall be prohibited and an ample supply of clean, fine dry sand, stone dust or other inert material shall be kept ready for segregating such fires.

(v) 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 installations approved by any recognised 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.

(8) (a) Every portable fire extinguisher to be provided under sub-rule (7) 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 accompanied by the maker's printed instructions for its use ; and

(iii) be examined, tested or discharged periodically in accordance with the maker's 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.

(9) Each factory shall detail a trained officer who shall be responsible for the proper maintenance and upkeep of all fire-fighting equipments.

(10) If the Chief Inspector is satisfied in respect of any factory or 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

Equipment for 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.

Dividing breeching-piece.

Branch-piece with 15mm. nozzles.

- 1 Diffuser nozzle.
- 1 Standpipe with blank cap.
- 1 Hydrant key.
- 4 Collapsible canvas buckets.
- 1 Fire hook (preventer) with cutting edge.
- 1 C.T.C. extinguisher one litre capacity.
- 1 Thirty metres length of 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 armoured 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 hoses complete with quick-release couplings.
 - 1 Dividing breeching-piece.
 - 1 Collecting breeching-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. manilarope.
 - 1 Nine metres extension ladder (where necessary).
 - 1 Pair rubber gloves.
 - 1 Heavy axe.
 - 1 Spade.
 - 1 Pick-axe.
 - 1 Crowbar.
 - 1 Saw.
 - 1 Hurricane lamp.
 - 1 Electric torch.

Note:—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 addition to the equipment for light trailer pump or large trailer pump, as the case may be.

Rules prescribed under section 41

72. Ladders:—All ladders used in replacing belts shall be specially made and reserved for that work and provided with books or an effective nonkid device. Ladders provided with hooks must have hooks fitted in such suitable position that they rest on the shaft when the bottom end of the ladder is resting on the floor.

73. 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 authorised to do such work whose name has been recorded in the register maintained in Form 10.

(2) Every such worker while oiling or attending to a 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

¹**[73-A. Safety of water-sealed gas-holder:—**(1) In this rule, a gas-holder means any vessel having storage capacity of not less than 140 cubic metres and used for storage of combustible gas, wherein the gas is stored at pressure controlled by a water seal between the fixed and the moving parts of the storage vessel, and includes vessels of smaller size, in respect of which the Chief Inspector declares that in the interest of the safety of workers working near such a vessel, provisions of this rule should apply.

(2) Every gas-holder, —

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

(b) shall be properly maintained in a safe condition.

(3) No gas-holder shall be taken into use in any factory for the first time unless:—

(a) information giving details of gas-holder is recorded in a register in Form 13A;

(b) certificate of its internal and external examination in Form 13B is obtained either from the manufacturer or from any person competent to conduct such examination; and

(c) such certificate is in possession of the occupier;

Footnotes:

1. Ins. by G. N. of 31st July 1964.

(4) Where in any factory two or more gas-holders are installed, each gas-holder shall be marked in a conspicuous manner with a distinguishing number or letter. If any gas-holder has two or more lifts, each lift shall also be marked with a distinguishing number or letter.

(5) If any lift of the gas-holder has been in use for more than ten years before the date of final notification, then every gas-holder shall be examined externally and internally (a) within two years, if it has been examined within the last two years, (b) within one year if it has not been examined within the last two years before the aforesaid date.

(6) Every gas-holder shall be examined internally by a person competent to conduct such examination once in every period of twelve months.

(7) Every gas-holder shall be examined internally by a person competent to conduct such examination at least once in every period of four years.

Explanation:-(a) For the purpose of this sub-rule, the internal examination of a gas-holder includes an examination of the thickness of the plates of the gas-holder including the sides and the crown by means of an electronic or other accurate device.

(b) If the Chief Inspector is satisfied that the electronic devices are not available, he may permit taking samples by cutting the plates from the sides and the crown of the gas-holder:

Provided that if the Chief Inspector is not satisfied that the samples are a representative sample, he may direct further samples to be cut to his satisfaction.

(c) Each sample disc cut under clause (d) shall be suitably marked for identification showing date of cutting and part of the gas-holder from which it is cut. Such samples shall be kept readily available for inspection until such time as similar discs are again cut at the next inspection.

(8) No gas-holder shall be repaired or demolished except under the direct supervision of a person who by his training, experience and knowledge of the necessary precaution against risk of collapse of structure, explosion and of person being overcome by gas is competent to supervise such work.

(9) A permanent register in Form 13A duly signed by the occupier or manager shall be maintained, along with a drawing to show details of construction of the gas-holder.

(10) A copy of the report of persons, competent to examine gasholders, shall be maintained in Form 13-B]

¹[73-B Polymerizing or curing machine:—(1) The following precaution 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-thirds 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 off 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 gauze shall be cleaned at least once a week.

(ix) Exhaust duct shall be cleaned 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 the various checks carried under sub-rule (2), shall be entered and every entry made therein shall be signed by the person making the checks.]

²[73-C. Safety measures in factories where equipment or pipeline containing inflammable materials are operated:—Where work of opening any equipment or pipeline containing inflammable liquids or gases is to be carried out in any factory, the following provisions shall be complied with, namely :—

(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.

Footnotes:

1. Ins. by G. N. of 11th May 1965.

2. Ins. by G. N. of 30th June 1969.

(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 planked so as to ensure that no inflammable gas or liquid can enter the same under any circumstances during the operation of repairs or maintenance. The Supervisor of the Process. Apartment shall check personally those 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 a charge of the Process Department, shall satisfy himself that the Above operations are complete and shall sign the work permit 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 work are properly screened, 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-

No part of the running equipment or pipeline or shall be opened unless a gets test is conducted by a responsible person to ensure that the equipment or pipeline is safe for opening.

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 authorised 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 persons trained in fire fighting operations, is kept available and his presence shall be ensured throughout the operation of the opening of the equipment.]

¹[73-E.* Safety measure in gas work:-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 say equipment into which gas if 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 or any gas works (not being a gas holder) it shall be ensured that the gas under pressure does not reach of 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, value 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 of any pipe valve or equipment in any gas works, a definite test shall be carried out by a comprtend person that no gas under preassure to the point of repair Details of the test carried shall out be mention in a certificate which shall be signed by the competent person. A copy of such certificate a tall be displayed prominently near the place 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 pipe, valve or other equipment while it is bains 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 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:—

The main or service shall be situated in the open air, and it shaft contain only, the following gases, separately or mixed at a pressure greats 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;

Footnotes:-

1. Ins. By G. N. of 8th October 1969 and numbered '73E' by *Corrigendum, I and I.D., No. FAC/I168/142003, Lab.III, dated 3rd December 1870.

(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 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 repair 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 gauge
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 on site.

(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.]

'[73-F. 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.

Footnotes:

1. Ins. by G. N. dated 17th April, 1975

Explanation:—Fragile material means sheets made of asbestos cement or made from similar materials such as perspex, polyester or other of plastic fibers.]

¹[73-H 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:—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 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 byproducts 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 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 graduate in Chemical Engineering or Chemical Technology with specialised knowledge in respect of the processes given in the schedule;

Provided that the Chief Inspector of Factories 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 Instruction:—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.

Footnotes:

1. Ins. by G. N. dated 2nd July, 1976

(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 process. All electrical fitting shall be of suitable name-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 wheel of trucks or conveyers, shall be constructed of non-sparking materials. Adequate precautions shall be taken to prevent the ignition of explosive or inflammable atmosphere by spark 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 or 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 service.

(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 residue 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 earthed supply tanks to prevent sparking due to static charge build up.

(4) 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 insure this:

Provided that in case employing out of vessels filled with high melting product, 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 rupture disc shall be provided on the vessel in addition to the usual spring-loaded safety valve. The pipe duct leading away from the rupture disc shall be taken out of the work-room shall be straight and without any bends in order to minimise 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-arrester.

(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 it reached, beyond which the reaction, if any, in the vessels is likely to get out of control or reach run-away stage.

(viii) There shall be arrangement such that it would be possible to introduce quickly, preferably chilled water or at least ordinary cool water circulation in the steam or other hearing coils, no sooner the hearing 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 an automatic arrangement 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) Exemption:— If the Chief Inspector of Factories 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 requirements of this rule are not necessary for the protection of person 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, subtract or modify such 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 explosive with the aid of any of these substances.

(1) Haloeenation 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) Sulphonyl Chloride (So2/c12) Phosphorus and such others.

(b) Fluorination agents such as Fluorine.

(c) Bromination agents such as a Bromine.

(d) Iodihation agents such as iodine, in liquid or gas phases.

(3) Aromatization and Isomerization process]

¹ [73-I. **Planting of trees:**—In every factory wherein more than one hundred workers ordinarily employed, the occupier of a factory shall plant and maintain trees within the precincts 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 prescribed under section 41 and 41G

²[73-J. **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; and employs more than 50 workers ; or

(c) which carries on 'hazardous process' as defined under section 2(cb) of the Act and employees more than 50 workers, 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 organisation can contribute effectively to the functioning of the Committee, shall be the Chairman;

(b) A Safety Officer and Factory Medical Officer, wherever available and the Safety Officer in such a case shall be the Secretary of the Committee;

Footnotes:

1. Ins. by G. N. dated 22-5:1984, published in M.G.G., Part I-L (Extra) 206.

2. Rule 73-J to 73-Z ins. by G. Noti. dated 10-1-1990 M.G.G., Pt. I-L Extra P. 40.

(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 the right to—

(a) ask for necessary information concerning health and safety of the workers.

(b) seek any relevant information concerning health and safety of the workers.

(7) Functions and duties of the Safety Committee shall include—

(a) assisting and co-operating 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;
id) undertaking educational, training and promotional activities:

(e) deliberating on reports of safety, environmental and occupational health surveys, emergency plans safety audits, risk assessment and implementation of the recommendations made in the reports ;

(f) carrying out health and safety surveys and identify causes of accidents;

(g) looking into any complaint made on the likelihood of an imminent danger to the safety and health of the workers and suggest 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.

Chapter IV-A

Rules prescribed under section 41-A read with section 112

73-K. Site Appraisal Committee :-(1) The following provisions shall govern the functioning of the Site Appraisal Committee, hereinafter referred to as the "Committee" in this rule-

(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 Organisation of the State Government;

(ii) a representative of the 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 purposes 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 on this Committee,

(3) Application for appraisal of sites—

(a) Applications for appraisal of sites in respect of the factories covered under section 2(eb) of the act shall be submitted to the Chairman of the Site Appraisal Committee.

(b) The application for site appraisal alongwith 16 copies thereof shall be submitted in the Form annuexed to this rule. The Committee may dispense with furnishing the information on any particular item in the Application Form if it consider the same to be not relevant to the application under consideration.

(4) Functions 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 earing on process and operations in different areas as per the provisions of rule 5 of the Environment (Protection) Rules, 1986 framed under the Envirnoment Protection Act, 1986

(c) The Committee may call for documents, examine experts, inspect tile site if necessary and take other steps for formulating its views in regard to the suitability of the site.

(f) wherever the proposed site requires clearance by the Ministry of Industries 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

From Of Application to the Site Appraisal Committee

(1) Name and address of the applicant

(2) Site Ownership Data -

(1)Revenue details
of site such as Survey No.....Plot
No.....etc....

(2) Whether the site is classified as forest and if so whether approval of the Central Government under section 6 of the Indian Forest act, 1927 has been taken.

(3) Whether the proposed site attracts the provisions of section 3(2) (v) of the environment Protection Act, 1986. If so, the nature the restrictions.

(4) Local authority under whose jurisdiction the site is located.

3. Site Plan:—

(1) Site Plan with clear identification of boundaries and total area proposed to be occupied and showing the following details near the proposed site—

(a) Historical Monument, if any, in the vicinity,

(b) Names of neighbours manufacturing units and human habitats, educational and training institutions, patrol installations, storages of LPG and other hazardous substances in the vicinity and their distances from the proposed Units.

(c) Water sources (rivers, streams, canals, dams, waters filtration plants, etc.) in the vicinity.

(d) Nearest hospitals, fire-stations, civil defence stations and police stations and their distances.

(e) High tension electrical transmission lines, pipe lines for water, oil, gas or sewerage, railway lines, roads, stations, jetties and other similar installations.

(2) Details of soil conditions and depth at which hard strata obtained.

(3) Contour map of the area showing nearby hillocks and

(4) Plot plan of the factory showing the entry and exit points, roads within, water drains, etc.

4. Project Reports: -

(1) A summary of the salient features of the project.

(2) Status of the organisation (Government, Semi-Government, Public or Private etc).

(3) Maximum number of persons likely to be working in the factory.

(4) Maximum amount of power and water requirements and source of their supply.

(5) Block diagram of the buildings and installations in the proposed project.

(6) Details of housing colonies, hospitals, schools and other infrastructural facilities proposed:—

5. Organisation structure of the proposed manufacturing units or factory:—

(1) Organisation diagrams of:—

Proposed enterprise in general.

Health, safety and environment protection departments and their linkage to operation and technical departments.

(2) Proposed Health and Safety policy.

(3) Area allocated for treatment of wastes and effluents.

(4) Percentage outlay on safety, health and environment protection measures.

6. Meteorological data relating to the site:—

(1) Average, minimum and maximum of:—
Temperature
Humidity
Wind velocities during the previous ten years.

(2) Seasonal variations' of wind direction.

(3) Highest water level reached during the floods in the area recorded so far.

(4) Lighting and seismic data of the area.

7. Communication Links:—

(1) Availability of telephone/telex, wireless and other communications facilities for outside communication.

(2) Internal communication facilities proposed.

8. Manufacturing process information.—

(1) Process flow diagram.

(2) Brief write-up on process and technology.

(3) Critical process parameters such as pressure build-up, temperature rise and run-way reactions.

(4) Other external effects critical to the process having safety implications, such as ingress of moisture or water, contact with incompatible substances, sudden power failure.

(5) Highlights of the built-in safety/pollution control devices or measure/incorporated in the manufacturing technology.

9. Information on Hazardous Materials—

(1) Raw materials, intermediates, products and by-products and their quantities (Enclose materials safety data sheet in respect of each hazardous substance).

(2) Main and intermediate storage proposed for raw materials/intermediates products/by-products (maximum quantities to be stored at any time).

(3) Transportation methods to be used for materials inflow and outflow, their quantities and likely routes to be followed.

(4) Safety measures proposed for: — handling of materials, internal and external transportation; and disposal (packing and forwarding of finished product).

10. Information on Dispersal /Disposal of waste and Pollutants—

(1) Major pollutants (gas, liquid, solid), their characteristics and quantities (average and at peak loads).

(2) Quality and quantity of solid wastes generated, method of their treatment and disposal.

(3) Air, water and soil pollution problems anticipated and the proposed measures to control the same, including treatment and disposal of effluents.

11. Process Hazards Information:—

(1) Enclose a copy of the report on environmental impact assessment.

(2) Enclose a copy of the report on Risk Assessment Study.

(3) Published (open or classified) reports, if any, on accident situations/occupational health hazards in similar plants elsewhere (within or outside the country).

12. Information on proposed Safety and Occupational Health Measures:—

(1) Details of fire-fighting facilities and minimum quantity of water, CO₂ and/or other fire-fighting measures needed to meet the emergencies.

(2) Details of in-house medical facilities proposed.

13. Information on Emergency Preparedness—

(1) On site emergency plan.

(2) Proposed arrangements, if any, for mutual aid scheme with the group of neighbouring factories.

14. Any other relevant information—

I certify that the information furnished above is correct to the best of my knowledge and nothing of importance has been concealed while furnishing it.

Name and signature of the applicant.

Rules made under Section 7A (3), 41B (2) and 112

73-L. Health and Safety Policy:—

(1) 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) are exempted from requirement of sub-rule (1):

Provided that, they are not covered in 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) organisational 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 contractor, sub-contractors, 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 techniques 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 intention 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, namely—

(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.

Rules made under section 41 B and 112

73-M. Collection and development and dissemination of information:-(1) The occupier of every factory carrying on a 'hazardous process' shall arrange to obtain or develop information in the form of Material Safety Data Sheet 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, namely:-

(i) the identity used on the label;

(ii) hazardous ingredient of the substance;

(iii) physical and chemical characteristics of the hazardous substance;

(iv) physical hazards of the hazardous substance, including the potential for fire, explosion and reactivity;

(v) health hazards of the hazardous substance, including signs and symptoms of exposure, and any medical conditions which are generally recognised as being aggravated by the exposure to the substance;

(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 any 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 substances, 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 the 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.

(c) The Material Safety Data Sheet shall be in the form given in the Schedule to this Rule.

(2) Labelling—

Every container of a hazardous substance shall be clearly labelled or marked to identify:—

- (a) the contents of the container;
- (b) the name and address of the manufacturer or importer of the hazardous substance;

- (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)

Section I: Material Identification And Use

Material Name/Identifier			
Manufacturer's		Supplier name	
Street Address		Street address	
City	State	City	State
Postal Code	Emergency Telephone No.	Postal Code	Emergency Telephone No.
Chemical Name		Chemical Identity	
Trade Name and Synonyms		Product Use	

Section II: Hazardous Ingredients of Material

Hazardous Ingredients	Approximate Concentration %	C.A.S. or UN number	L.D. 50 (Specify Species and Route)	L.C. 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
Vapour Pressure (mm)	Vapour Evaporation density Rate (Air-1)	Boiling point (°C)	Freezing Point (°C)
Solubility in Water (°20C)	PH	Density (g/ml)	Co-efficient of Water/Oil Distribution

Section Iv: Fire And Explosion Hazard Of Material

Flammability—

-Yes-No. If yes, under what conditions.

Means of Extinction.

Special Procedures

Flash point (°C) and Method	Upper Explosive Limit (%by Volume)	Lower Explosive Limit (%by Volume)
Auto-ignition Temperature (°C)	TDG Flammability	Hazardous Combustion Products
Explosion	Data-Sensitivity to Chemical Impact	Sensitivity to Static Discharge

Section V: Reactivity Data

Chemical Stability

-Yes-No. If no, under what conditions

Incompatibility with other substances as, which ones

Reactivity and under what

Hazardous Decomposition Products

Material Name/Identifier

Section VI: Toxicological Properties Of Material

Route of Entry

-Skin Contact

-Inhalation acute

-Skin Absorption - Inhalation Chronic

-Eye Contact- Ingestion

Effect of Acute Exposure to material

Effect of Acute Exposure to material

Exposure limits limits

Irritancy of Material

Sensitization to Material

Carcinogenicity, Reproductive Effects, Teratogenicity, Mutagenicity

Synergistic Materials

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 Measures

First Aid Measures		
Sources used		
Additional Information		
SECTION IX; DATE OF PREPARATION OF MATERIAL SAFETY, DATA SHEET		
Prepared by (Group, Department, etc.)	Phone No.	Date

Notes:—

1. CAS or UN Number-Chemical Abstract Service or United Nations (UN) number.
2. LD 50-lethal Doze-50% (LD 50-specify species and route.)
3. LD 50-Lethal Concentration-50% (LC 50-specify species and route);
4. TDG Flammability-Transport > of Dangerous Goods Flammability Classifications by United Nations.

73-N. Disclosure of Information to workers:—(1) The occupier of a factory carrying on a 'Hazardous process' shall supply to all workers the following information in relation to handlings of hazardous materials or substances in the manufacture, transportation, storage and other process :—

- (a) requirements of sections 41B, 41G and 41.H of the Act;
- (b) a list of hazardous processes carried on in the factory;
- (c) location and availability of all Material Safety Data Sheets as per rule 73-M;
- (d) physical and health hazards arising out of the physical and health hazards arising out of the exposure to or handling of substances.

(c) 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 operation;

(h) meaning of various labels and markings used on the containers of hazardous substances as provided under Rule 73-M;

(i) Sign 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;

(l) 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 complied 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.

(3) The Chief Inspector may direct the occupier to supply further Information to the workers as deemed necessary.

73-0. Disclosure of information to general public:-(1) The Occupier of every factory carrying on a ' hazardous process' shall in consultation with the District Emergency Authority designated by the State Government, take appropriate steps to inform the general public who are likely to be in the area which might be affected by an accident. Such information shall include,—

(a) name of the factory and address where situated;

(b) identification, by names and position of the person giving the information;

(c) confirmation that the factory has approval from the Factories Inspectorate and Pollution Control Board;

(d) an explanation in simple terms of the hazardous process(s) carried on in the premises;

(e) the common names of the hazardous substances used which could give rise to an accident likely to affect them, with an indication of their principal harmful characteristics

(f) brief description of the measures to be taken to minimise the risk of such an accident in compliance with its legal obligations under relevant safety statutes ;

(g) salient features of the approved disaster control measures ted in the factory;

(h) details of the factory's emergency warning system. For the General Public;

(i) general advice on the action members of the public should take on hearing .the warning;

(j) brief description of arrangements in the factory, including liaison with the emergency services, to deal with foreceable accidents of such nature and 19 minimise their effects; and

(k) details of where further information can be obtained

(2) The occupier shall also supply any further information:—

(a) to general public as directed by the Emergency Planning Officer from time to time;

(b) to the elected representatives of the general public on request.

(3) The occupier shall endeavour to enter into an agreement with the Emergency Planning Officer for the are within whose jurisdiction the factory' is situated for the Emergency Planning Officer to take appropriate steps to inform the General Public outside the factory who Srelikely to be affected by an accident as required in sub-rule (1).

(4) The information prescribed in sub-rule (1) shall be in the Regional Language and in English or Hindi.

73-P. Disclosure of information to the local authority:—The occupier of every factory carrying on a hazardous process' shall furnish the following information in writing to the local authority having jurisdiction over the area in which the factory is situated namely:—

(a) The information furnished to general public as prescribed in rule 73-O,

(b) A, statement of the names and quantities generally stored or in process df hazardous substances included in the list of chemicals prescribed under clauses (vi) and (vii) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986.

73-Q. Disclosure of information to District Emergency Authority:-The occupier of a factory carrying on a hazardous process, shall intimate the District Emergency Authority designated by the State Government, all information haying a bearing on preparation of an on-site emergency plan, and a disaster control and management plan in respect of the factory.

Without prejudice to the generality of this clause, the occupier shall

furnish the District Emergency Authority the following:—

(a) a report on, status relating to risk assessment and environmental impact assessment and the measures taken for prevention of accidents,

(b) by compilation of Material Data Sheets in-respect of hazardous substances used, produced or stored in the factory,

- (c) a statement on all possible sources of accidents involving fire, explosion, release or leakage of toxic substances and the plan of the premises where such an accident may occur,
- (d) a statement on resources and facilities available for dealing with an emergency including any agreement entered into with a neighbouring factory for aid and assistance in the event of an emergency,
- (e) a map of the area showing the approaches to the factory, location of emergency facilities, such as hospitals, police, fire services.
- (f) the organisation of the management and the responsibility for safety, indicating therein the persons responsible for on-site emergency action;
- (g), details relating to alert systems;
- (h) information on availability of antidotes for, poisoning resulting from an accident;
- (i) any other information as may be considered relevant by the occupier or, asked for by the District Emergency Authority.

73-R Disclosure of information to the chief Inspector(1) The occupier of every factory carrying on a hazardous process shall furnish, in writing, to the chief inspector a copy of all the information furnished to the workers, local authority, general public and the District Emergency Authority.

(2) A copy of compilation of Materials 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 this Act and Rules made thereunder.

73-S. Information on industrial wastes:—(1) The information furnished under rules 73-N, 73-O, 73-Q and 73-R 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, waste, and arrangements for their final disposal.

(2) It shall also include information on the quality and quantity of gaseous wastes discharged through the stacks or other openings and arrangements such as provision of scrubbers, cyclone separators, electrostatic 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.

73-T. 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 3N to 73-R to the workers, general public, local authority, Chief Inspector and the District .Emergency Authority.

(2) In the event of any change in the process of operations or methods or work or when 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-

78-U, Confidentiality of information:—(1) The occupier of a factory carrying on hazardous process shall disclose all information needed for protecting safety and health of workers and the general public in the neighbourhood to:—

- (a) His workers;
- (b) District Emergency Authority,

as required under rule 73-N and 73-Q. 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 stating the reasons for withholding such information. The Chief Inspector shall give an opportunity to the occupier of being heard and pass an order on 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.

Rules made under sections 41-B, 41-C and 112 specific responsibility of the occupier in relation to hazardous process

73-V. Medical Examination :-(1) Workers employed in a 'hazardous process' shall be medically examined by a qualified medical practitioner hereinafter referred to as Factory Medical Officer, in the following manner, namely:—

- (a) once before employment to ascertain physical fitness of the person to do 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 worker.
- (c) the details of pre-employment and periodical medical examinations carried out as aforesaid shall be recorded in the Health Register in Form 7.

(2) No person shall be employed for the first time without a certificate of Fitness in Form 6 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 Certifying Surgeon whose opinion shall be final in this regard.

(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 examine 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 fully incapacitated; in the opinion of the Certifying Surgeon, in which case the worker affected shall be suitably rehabilitated :

Provided that, the Certifying Surgeon on his own may examine any worker when he considers it necessary to do so for ascertaining the suitability of his employment in the ' hazardous process' or for ascertaining the health status of any worker.

(4) 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. .

(5) An inspector may, if he deems it necessary to do. so, refer a worker to the Certifying Surgeon for Medical Examination as required under sub-rule (1). 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.

(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.

73-W. Occupational Health Centres:-(1) In respect of any factory carrying on "Hazardous Process' there shall be provided and maintained; in good order an 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 Factory Medical Officer on retainership 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 73-V and render medical assistance during any emergency;

(ii) a minimum of 5 persons trained in first-aid procedures amongst whom atleast 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 equipments 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 1,000 workers or part thereof;

(ii) an Occupational Health Centre having at least 2 rooms each with a minimum floor area of 15 sq. m. with floors and walls made of smooth and unpervious surface and adequate illumination and ventilation as well as equipments as per the schedule annexed to this rule;

(iii) there shall be one nurse, one dresser-cum-compounder and one sweeper-cum-ward boy throughout 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 Degrees Act of 1916 or in the Schedules to the Indian Medical Council Act, 1956 and possess a Certificate of Training in Industrial Health of minimum three months duration recognised by the State Government:

Provided that:—

(i) a 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 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 DG FASLI or the State Government in accordance with the guidelines issued by DG FASLI,

(4) within one month of the appointment of a Factory Medical Officer, the occupier of the factory shall furnish to the Chief-Inspector the following particulars namely :—

- 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 1,80 cm. x 150 cm.
3. Means for sterilizing instruments.
4. A couch.
5. Two buckets or containers with close fitting lids.
6. A kettle and spirit stove or other suitable means of boiling water.
7. One bottle of spiritus ammeniac aromaticus (120 ml").
8. Two medium size springes
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 spooris
14. Two graduated {120 ml) measuring glasses.
15. One wash bottle (1000 cc) for washing eyes,
16. One bottle (one litre) carbolic lotion 1 in 20.

17. Three chairs.
18. One screen.
19. One electric hand torch.
20. An adequate supply of tetanus toxied.

21. Coramine liquid (60 ml.)
22. Tablets-anthistaminic, antispasmodic (25 each).
23. Syringes withneedles-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 scapel.
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 Park-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 x 100 mm x 6 mm.
2. Four plain wooden splints 350 mm x 75mm x 6mm.
3. Two plain wooden splints 250 mm x 50 mm x 12 mm.
4. One pair artery forceps,
5. Injection-morphia, Pethidine, Atropine, Adrenaline, Coramine, Novocaine (2 each).
6. One surgical scissors.

(2) For 'factories employing above 200 workers—

1. Eight plain wooden splints 900 mm x 100 mm x 6 mm.
2. Eight plain wooden splints 350 mm x 75 mm x 6 mm.
3. Four plain wooden splints 250 mm x 50 mm x 12 mm.
4. Two pairs artery forceps.
5. Injection-morphia, Pethidine, Atropine, Adrenaline, Coramine, Novocaine (4 each).
6. One surgical scissors.

73-X. Ambulance Vans: - (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 the full-time Driver-cum-Mechanic and 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 than the purpose stipulated herein and will normally be stationed at or near to the Occupational Health Centre:

Provided that, a factory employing less than 266 workers, may make arrangement for procuring such facility at short notice from nearby "hospital or other places, to meet any emergency.

(2) The Ambulance should have the following equipments:—

(a) General:-A wheeled stretcher with folding and adjusting devices with the head of the stretcher capable of being tilted upwards fixed suction unit with equipment; fixed, oxygen supply which equipment, Pillow with case;—Sheets Blankets ; -Towels; Emesis bag, Bed pan, Urinal, Glass.

(b) Safety equipment:—Flaros with life of 30 minutes; Flash lights, Fire extinguisher dry powder type; Insulated gauntlets.

(c) Emergency care equipments :—(i) Resuscitation; Portable suction unit, portable oxygen units, Bag-Valve-mask; hand operated artificial ventilation, unit, airways-mouth gags: — Tracheostomy adopters, short spine board-IV, fluids with administration unit, B. P. monometer:—Cugg-Stethoscope.

(ii) Immobilization:—Long and short padded boards. Wire ladder splints; Triangular bandage-Long and short spine Boards.

(iii) Dressings:—Gauze pads-4" x 4 "Universal; dressing-10" x 36"; Roll of aluminium foils-Soft roller bandages 6"x 5" yards- Adhesive tape in 3" roll-Safety pins; Bandage sheets; Burn Sheet.

(iv) Poisoning: - Syrup of pectae; Activated Charcoal Prepacketed in doses—Snake bite kit, Drinking water.

(v) Emergency Medicines:—As per requirement (under the advice of Medical Officer).

73-Y. Decontamination facilities:-In every factory, carrying out hazardous process' the following provisions shall be made to meet emergency:-

(a) fully equipment first-aid box;

(b) readily accessible of drenching with water for flooding. Workers or parts of body 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:—

Number of persons employed at any time	Number of drenching Showers
(i) Upto 50 workers	2
(ii) Between 51 to 200 workers	2+1 for every additional 50 or part thereafter
(iii) Between 201 to 500 workers	5+1 for every additional 100 or part thereafter
(iv) 501 workers and above	8+1 for every additional 200 or part thereafter

(c) a sufficient number of eye wash bottle filed 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.

73-Z. Marking available Health Records to workers:—(1) The occupier of every factory carrying out 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 noticable 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, Employees' State Insurance Corporation (Medical Benefits); and
The Director General, Factory Advice Service and Labour Institutes.

(2) A copy of the up-to-date health records including the record of worker's exposure to hazardous process or, as the case may be, the medical records shall be supplied to the worker on receipt of an application from him. X-Ray plate and other medical diagnostic reports may also be made available for reference to his medical practitioner.]

¹[**73-ZA. Safety precautions for Thermic Fluid Heaters:-**(1) In respect of any factory where thermic fluid heater has been installed (hereinafter called "heater"). and following provisions shall be complied with—

- (i) All heater shall be of such construction that, the coils shall be removable for periodic cleaning, visual inspections and hydraulic test,
- (ii) Suitable arrangements shall be made for cooling the furnace effectively in case of power failure to the heater.
- (iii) Before restarting the furnace of heater it shall be effectively purged.
- (iv) The thermic fluid used for heater shall be circulated in a closed circuit formation with an expansion cum deaerator tank. This tank shall be located outside the shed where the heater is installed.
- (u) Every Oil or Gas fired heater shall be provided with a photo-resistor actuated audio visual alarm to indicate flame failure and automatic burner cut-off.
- (vi) The stack temperature monitor-cum-controller with audiovisual alarm shall be provided to the heater so as to warn the operator in case the outlet temperature exceeds the specified minimum
- (vii) All heater shall be provided with following devices and the same shall be maintained in efficient working order.
 - (a) level indicator in the expansion tank;
 - (b) temperature indicator of thermic fluid ;
 - (c) differential pressure switch across the inlet and the outlet line of the heater tubes; and
 - (d) temperature control device for the fuel supply to the burner.
- (viii) All devices mentioned in clause (vii) above for oil or gas fired heater shall have inter-locking arrangement with burner so that in case of any pre-determined limits being crossed the supply of fuel and air to burner shall automatically be cut-off.

Footnotes:

1. Added by M.G.G., dt. 15-3-1997.

- (ix) All safety interlocks when operated shall be indicated or on the control panels of the heater by a suitable audio-visual alarm.
- (x) Electrical panel for- the heated shall be located near the heater but not so close as to be exposed to spilling or leaking oil.
- (xi) The heater shall be located in a place segregated from other manufacturing activities.
- (xii) Explosion vent for heater shall be so installed that, the release taken place at safe location.'
- (xiii) The heater Coil including the coil connected to it in the users' equipment subject to pressure, shall be tested by competent person once atleast in every 12 months. The test pressure shall not be less than twice the operating pressure.
- (xiv) If repairs are carried out to the heater, coil including coil connected to it in users equipment shall be got examined from competent person before taking in into use.
- (xv) Maximum temperature of thermic fluid in the heating of heater coil shall not exceed the figure specified by the manufacturer. The thermic fluid used in heater, shall conform to the specifications prescribed by the manufacturer 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.
- (xvi) Cleaning of the internal surface of the heater for removing soot and check up the refractory surface on the inside shall be carried out every. month, or as often as required depending upon working conditions. The coils, of heater shall be removed and surface of the coil 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 period of use.
- (xvii) A separate register containing the following information for the heater shall, be maintained.
 - (a) weekly checks carried out confirming the effectiveness of the inter-lock;
 - (b), weekly checks confirming that all accessories are in good state of repairs; and
 - (c) information regarding fuel oil temperature, pressure, thermic fluid inlet/outlet pressure and temperature,, fuel gas temperature, recorded at four hourly interval. (xviii) The heater when in operation shall always be kept in charge of a trained operator.

Footnotes:

1. Added by M.G.G.dt 15-3-1997