THE STATE OF COMPLIANCE OF THE SAFETY PROVISIONS OF THE FACTORIES ACT, 1948

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ABSTRACT

Safety of workers in factories is of paramount importance to all. The Factories Act, 1948 deals in its chapter IV with various provisions relating to safety of workers in the factories. This survey study investigates the state of compliance of these laid down provisions in 100 factories (57 iron foundries and 43 engineering industries) of Agra division of U.P. state of India. 500 workers from these factories were also selected for this study. Observation Schedule, Interview Schedule and Interview Guide were used to collect information and facts from the factories, owners, occupiers, workers, trade unionists, lawyers and officers of labour department. This study makes certain empirical conclusions on the state of compliance of various safety measures relating to precautionary steps; lubrication and adjusting operations; lifting machines, chains, ropes and excessive weights; revolving machinery and pressure plant; floors, stairs, means of access, sumps and openings on floors; protection of eyes and dangerous fumes, gases and dust; and fire and safety of building.

KEY WORDS : *Safety; Workers; Compliance; Precautionary Steps; Revolving Machinery; Fire;*

INTRODUCTION

Safety of workers at workplace is of paramount importance to all-the workers and their loved ones, companies they work in and the nation whose citizens they are. Workplace safety measures, practices and procedures keep the employees safe from workplace injuries, illnesses and deaths. The union and state governments in India have enacted a plethora of labour laws in which safety of workers is one of the basic and primary requirements in a factory. Unless body, mind and life of workers is secured, smooth and proper working can not be ensured in any factory. The object of the Factories Act, 1948 is to ameliorate the working conditions and to provide with the effective measures of safety of the workers from accidents, causing partial or total disablement and sudden misfortunes affecting the victims and their dependents.

The Factories Act, 1948 deals with security and safety measures under its Chapter IV containing Sections 21 to 41. There have been made significant amendments in the provisions dealing with safety so as to make the measures more effective and appropriate. Their actual compliance at the factory level was so far not sufficiently been empirically studied to examine how far they were being complied with. This survey study is an endeavor to empirically investigate the state of compliance of the safety provisions of the Factories Act, 1948.

Raman (1965) quoted S.P. Bajaj as stating that Government of India too adopted a very feeble and ineffective attitude in the matter of enforcement of the labour laws. They seem to have revealed in a policy of laissez faire. Factory work with 60 hrs/week and 11 hrs per day till 1926, together with violation of the Factories Act by employers who went unpunished or punished lightly added to the misery of the working class.

Giri (1970) stated that wherever inspecting officers have been appointed, they have been overburdened with a variety of duties and responsibilities spread over a wide area. Some inspectors appointed under the provisions of the Factories Act, 1948 are unable to finish even one round of routine inspection of the industrial units coming under their jurisdiction during the course of one year. It is therefore, needless to

speak of the fate of important cases referred to them for quick disposal after proper inquiry, many irregular methods and practices continue undetected.

Monga (1978) stated that it is only through such studies at the micro level that fruitful assessment of the efficiency of labour laws and their implementation at the plant level and impediments in the course of their enforcement, if any could be identified.

Sharma (1979) emphasized that it is the responsibility of the factory management to look after the implementation of all provisions of the Factories Act, 1948, so as to ensure, safety, welfare and health of the workers.

Saxena (1982) found that labour laws are not implemented properly in the industries. He made a plea for the adoption of labour legislation and to maintain harmonium human relations.

Rao (1989) found the following factors responsible for industrial accidents; excessive length of logs; improper shortage of logs in holds and on the deck of ships; improper stocking of timber logs on the shore; more than one party handling one stack of consignment; improper handling generated by improper shortage and stacking; and improper transportation of wooden logs.

Gangopadhy (1990) revealed that quality of work life (QWL) is perceived significantly different by the occupational hierarchy in the organization and the perception of QWL has significant effect on the mental health and attitude towards safety at work.

METHODOLOGY

This survey research is based upon the data collected from 100 factories (57 iron foundries and 43 engineering industries) of Agra, Mathura, Firozabad and Mainpuri districts of Agra division. The factories under study were selected through purposive sampling and 05 workers from each factory were selected through random sampling technique. The owners, occupiers, workers, trade unionists, lawyers and government officials were interviewed through Interview Schedule and Interview Guide, whereas the factory level observations were made through Observation Schedule.

ANALYSIS AND INTERPRETATION

Tables 1: Types Of Precautionary Safety Methods.

S. No.	Methods	Foundries		%	Engg, Ind.	%	Total
1.	Fencing	10		31.3	22	68.7	32
2.	Casing	08		38 1	13	61.9	21
3.	Safety Guards	08		42.1	11	57.9	19
4.	Other(s)	22		38.6	35	61.4	57

Table 1 shows that most (57%) of the factories provided precautionary safety methods other than fencing, casing and safety guards, of which 61.4% were engineering industries and 38.6% were iron foundries. Fencing was provided in 32% of the industries in which 68.7% were iron foundries and 31.3% were engineering industries. Precautionary safety measures of casing and safety guards were adopted in 21% and 19% of the factories respectively. Precautionary safety measures are provided comparatively in more number of engineering industries than in iron foundries.

Table 2: Compliance Of Provisions Relating To Examination, Lubrication And Adjusting Operations.

S. No	Provisions	Foundries	%	Engg. Ind.	%	Total
1.	Only specially trained male workers carry out such work	18	32.1	38	67.9	56
2.	Workers put on tight fitting clothing	07	25.0	21	75.0	28
3.	Tight fitting clothing is supplied by the Occupier	04	33.3	08	66.7	12
4.	Names of such workers are recorded in the Register	07	25.0	21	75.0	28
5.	Such workers are furnished with certificates of appointment in Form No. 25	07	25.0	21	75.0	28
6.	No young person is required/ allowed to do such work	57	57.0	43	43.0	100
7.	Notices or posters in Hindi for precaution of accidents are displayed	14	35.0	26	65.0	40
8.	Contents of such posters and notices are explained to each worker	08	44.4	10	55.6	18

Data contained in table 2 show compliance of Section 22 of the Factories Act, 1948 relating to work on or near machinery in motion. No young person was allowed or required to do work such as examination, lubrication and adjusting operations on or near machinery in motion in any of the 100 units surveyed. In 56% of the factories, examination, lubrication and adjusting operations were carried on by only specially trained male workers. Notices or posters in Hindi for precaution of accidents were displayed in 40% of the factories, of which 65% were engineering industries and the rest 35% were iron foundries.

Contents of such precautionary notices or posters were explained to workers only in 18% of the factories - engineering industries (55.6%) and foundries (44.4%). Workers, while carrying out examination, adjusting and lubrication of machinery, put on tight fitting clothing in 28% of the factories, of which 75% were engineering industries and 25% were iron foundries. Names of such workers were recorded in register and they were provided with certificates of appointment in the Form No. 25 in 28% of the factories - 75% engineering industries and 25% foundries. Tight fitting clothing was supplied by the occupiers in 12% of the factories of which maximum (66.7%) were engineering industries. The provisions as laid down in Section 22 of the Act and rules made there under relating to adjusting operations, examination and lubrication of machinery were better observed in higher number of engineering industries than in iron foundries.

Data in above table 3 depicts implementation of Sections 28, 29 and 34 of the Factories Act, 1948 and rules made thereunder. Lifting machines, chains, ropes; and incidences of lifting, carrying or moving excessive weights were found in a small number of factories, majority of which were iron foundries.

Table 3: Safety Measures For Lifting Machines, Chains, Ropes and Excessive Weights.

S. No.	Safety Measures	Foundries	%	Engg. Ind.	%	Total
1.	All parts are of good construction and sound material	09	56.31	07	43.7	16
2.	Adequate strength and free from defects	11	78.6	03	21.4	14
3.	Properly maintained in safe condition	13	81.3	03	18.7	16
4.	Examined by a competent person regularly	05	71.4	02	28.6	07
5.	Not loaded beyond safe working load	06	66.7	03	33.3	09
6.	Crane does not approach within six meters of any fixed place	10	76.9	03	23.1	13
7.	No person lifts, carries or moves excessive weight	03	25.0	09	75..0	12

Lifting machines, chains and ropes were properly maintained in safe condition in 16% of the factories, of which 81.3% were foundries and the rest 18.7% were engineering industries. All of their parts were of good construction and sound material in 16% of the industries, of which 56.3% were foundries and 43.7% were engineering industries. Such machinery was of adequate strength and free from defects in 14% of the industries, of which 78.6% were foundries. Cranes did not approach within six meters of any fixed place in 13% of the factories and no person was found lifting, carrying or moving excessive weight in only 12% of the industries. Lifting machines, chains and ropes were examined by the competent person(s) regularly in the minimum number (07%) of the industries. And they were not loaded beyond prescribed safe working load in 9% of the industries only.

Sections 30 and 31 of the Factories Act, 1948 and the rules made thereunder by the U.P. Government lay down certain safety measures for different types of revolving machinery and pressure plant. Table 4 shows that maximum speed of revolving machinery were not exceeded in 21% of the factories, of which 76.2% were engineering industries and 23.8% were foundries. In an equal number of factories, prescribed safety measures were provided to secure safe working pressure of pressure plant and machinery, of which 76.2% were foundries and the rest 23.8% were engineering industries.

Tables 4: Safety Measures For Revolving Machinery and Pressure Plant.

S. No.	Safety Measures	Foundries	%	Engg. Ind.	%	Total
1	A notice of safe working peripheral speed affixed near revolving machinery	03	25.0	09	75.0	12
2.	Maximum speeds of revolving machinery not exceeded	05	23.8	16	76.2	21
3.	Measures provided for safe working peripheral speed	03	15.8	16	84.2	19
4.	Prescribed safety measures provided for safe working Pressure	16	76.2	05	23.8	21

In 19% of the factories, safety measures were provided for safe working peripheral speed in which engineering industries took the lead (84.2%). Notice(s) of safe working peripheral speed were found affixed near revolving machinery in only 12% of the industries surveyed, of which 75% were engineering industries.

Table 5: Safety Measures For Floors, Stairs, Means Of Access, Sumps And Opening On Floors.

S.No.	Safety Measures	Foundries	%	Engg. Ind.	%	Total
1.	Floors, stairs and means of access are of sound construction	17	42.5	23	57.5	40
2.	Properly maintained	16	45.7	19	54.3	35
3.	Free from any obstruction	14	43.8	18	56.2	32
4.	Free from substances causing slip	20	74.1	07	25:9	27
5.	Steps, stairs, passages and gangways provided with handrails	11	35.5	20	64.5	31
6.	Precautions for working at a height	07	77.8	02	22.2	09
7.	Pits, sumps, openings in floors are covered or fenced.	03	17.6	14	82.4	17

Data in above table 5 depicts observance of provisions of Sections 32 and 33 of the Factories Act, 1948. Floors, stairs and means of access were of sound construction in 40% of the industries of which more than half (57.5%) were engineering industries. These were properly maintained in 35% of the industries, of which 54.3% were engineering industries and 45.7% were iron foundries. Floors, stairs and other means of access were found free from any obstruction in only 32% of the industries. Steps, stairs, passages and gangways were provided with handrails in only 31 % of the factories, of which 64.5% were engineering industries and 35.5% were iron foundries. Floors, stairs and other means of access were free from substances causing slip in only 27% of the industries of which a majority of them (74.1%) were foundries. Pits, sumps, openings in floors were covered or fenced in 17% of the factories; and precautions for working at a height were taken in only 9% of the factories, of which iron foundries were 77.8%.

Table 6: Safety Measures For Protection Of Eyes And Dangerous Fumes, Gases And Dust.

S. No.	Safety Measures	Foundries	%	Engg. Ind.	%	Total
1.	Screens/goggles provided for protection of eyes	02	33.3	04	66.7	06
2.	Manhole(s) and means of egress provided for gases and fumes	20	37.7	33	62.3	53
3.	Safety measures during removal of gases, fumes, vapour etc.	18	64.3	10	35.7	28
4.	Certificate for space being free from dangerous gases and fumes	01	33.3	02	66.7	03
5.	Persons wear breathing apparatus while dealing with gases, fumes etc.	01	50.0	01	50.0	0

This table 6 contains data on safety measures provided for protection of eyes, dangerous fumes, gases and dust to ensure compliance of Sections 35 and 36 of the Factories Act, 1948 and rules made thereunder by the State Govt., of U.P. It shows that manhole(s) and means of egress were provided for gases and fumes in 53% of the total factories surveyed, of which 62.3% were engineering industries and the rest 37.7% were iron foundries. Besides, safety measures were also provided to the workers during removal of any gas, fume, vapour etc. in only 28% of the factories, of which majority of them (64.3%) were iron foundries and remaining 35.7% were engineering industries. Screens or goggles were provided

to the workers for protection of eyes in 6% of the factories, of which 66.7% were engineering industries. Certificates for space being free from dangerous gases and fumes were obtained by only 3% factories; and persons put on breathing apparatus while dealing with gases, fumes etc. in merely 2% of the factories.

Table 7: Safety Measures In Case Of Fire And Safety Of Building.

S.N.	Safety Precautions	Foundries	%	Eng. Ind.	%	Total
1.	Measures to prevent outbreak and spread of fire	32	44.4	40	55.6	72
2.	Equipments and facilities for extinguishing fire	30	44.1	38	55.9	68
3.	Safe means of escape in the event of fire	20	37.0	34	63,0	54
4.	Workers familiar with means of escape	21	42.8	28	57.2	49
5.	Building and its parts are safe and properly maintained	32	45.7	38	54.3	70

Sections 38 and 40 A of the Factories Act, 1948 require the employers to take safety measures for preventing and extinguishing fire; and safety and maintenance of buildings. Above table 7 shows that safety measures to prevent outbreak and spread of fire were taken in most (72%) of the factories, of which 55.6% were engineering industries and 44.4% were foundries. Equipments and facilities for extinguishing fire were also provided and maintained in almost equal number of factories (i.e 68%). Buildings and its parts were found safe and properly maintained in 70% of the factories, in which 54.3% engineering units and 45.7% iron foundries were included. Moreover, safe means of escape in the event of fire were provided in 54% of the factories, of which 63.0% were engineering units and the remaining were iron foundries. Workers were made familiar with means of escape and routine to be followed in case of fire in 49% of the industries.

Table 8: Reasons for Not Providing Safety Measures.

S.No.	Reasons	Foundries	%	Engg,Ind.	%	Total
1.	Workers are always cautious and safe	33	45.2	40	54.8	73
2.	No need and feasibility of such precautions	22	43.1	29	56.2	51
3,	Workers don't like	07	29.2	17	70.8	24
4.	No dangerous job; inbuilt safety in Machines	03	13.0	20	87.0	23
5.	Financial constraints	19	39.6	29	60.4	48
6.	Authorities don't enforce	07	28.0	18	72.0	25
7.	Irresponsible and unfaithful workers destroy such measures	25	56.8	19	43.2	44
8.	Occupier is unaware of such requirements	03	27.3	08	72.7	11

Data contained in table 8 mentions the reasons responsible for not providing safety measures. 73% respondents said that workers were always cautious and safe by themselves, therefore, safety measures were not provided. Of the factories citing this reason, 54.8% were engineering units and 45.2% were iron foundries. 51% of the interviewees responded that such safety measures were not needed and such precautions were not feasible. There were financial constraints responsible for not providing safety measures to 48% of the industries surveyed. 44% of the informants said that workers were irresponsible and unfaithful and they destroyed such safety measures. In 23 to 25% of the factories, the safety measures were not provided because workers did not like and did not demand; there was no dangerous job; there

was inbuilt safety in machines and authorities did not enforce such provisions. Occupiers were also unaware of such safety requirements in at least 11% of the factories.

CONCLUSTIONS

1. Types of precautionary safety methods adopted in the factories which included fencing, casing, safety guards etc, were provided comparatively in more number of engineering industries than in iron foundries.
2. No young person was required or allowed to do work relating to adjusting, examination and lubrication of machinery in any of the factories covered in this study. Only specially trained male workers carried out such work in 56% of the factories. Notices or posters in Hindi for precaution of accidents were displayed in 40% of the factories. Provisions concerned with adjusting operations, examination and lubrication of machinery are better observed in higher number of engineering industries than in iron foundries.
3. Lifting machines, chains, ropes and lifting or moving excessive weights were found in a small number of factories. These were properly maintained and their all parts were of good construction and sound material. In 16% of the factories. Lifting, chains and ropes were regularly examined by competent person(s) in 7% factories and they were not loaded beyond safe working load in 9% of the factories.
4. Among safety measures for revolving machinery and pressure plant, the safety measures included: maximum speeds for revolving machinery were not exceeded (21%); prescribed safety measures were provided for safe working of pressure plant and machinery (21%); measures were provided for safe working peripheral speed (19%); and notice of safe working peripheral speed was affixed near revolving machinery (12%).
5. Safety measures for floors, means of access, pits, sumps, and openings in floors were better provided and maintained in more number of iron foundries than engineering industries, stairs and means of access were of sound construction in 40% of the factories Steps, stairs, passages and gangways were provided with handrails in 31% factories and precautions were taken for working at a height in 09% of the factories.
6. Screens/goggles were provided for protection of eyes in 06% of the factories only. Manhole(s) and means of egress for gases and fumes were provided in 53% units and safety measures during removal of gases, fumes, vapour etc were provided in 28% factories. 3% factories had certificates for space being free from dangerous gases and fumes. Persons wore breathing apparatus while dealing with gases, fumes etc. in only 2% factories. Safety measures for protection of eyes and dangerous fumes, and dust were provided in higher number of engineering industries than foundries.
7. Measures were taken to prevent outbreak and spread of fire in 72% factories, and building of 70% factories were safe and properly maintained. Equipments and facilities for extinguishing fire were provided in 68% industries and safe means of escape in the event of fire were provided in 54% factories; but workers were familiar with these means of escape only in 49% of the factories covered in the study. Safety of building and safety measures in case of fire were found more satisfactory in engineering industries than in foundries.
8. Reasons for not providing safety measures were: workers were always cautious and safe (73%); no need and feasibility of such precautions (51%); financial constraints (48%); irresponsible and unfaithful workers who destroyed such measures (44%); authorities don't enforce (25%); workers don't like and demand (24%), no dangerous job and inbuilt safety in machines (23%); and occupier was unaware of such requirements (11%).

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