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EXECUTION OF PROVISIONS OF THE FACTORIES ACT, 1948 WITH SPECIAL REFERENCE TO DOUBLE EMPLOYMENT, REGISTERS OF EMPLOYEES, EMPLOYMENT OF WOMAN AND CHILDREN, AND LEAVE WITH WAGES.

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Abstract

Labour laws are the product of Industrial Revolution which necessitated the state intervention through labour laws to protect the working class from exploitation by the industrial employers. The Union Government enacted the Factories Act, 1948 to regulate hours of work and providing for minimum health, safety and welfare measures for benefit of the workers. The state governments are generally the administrative and enforcement authorities to make rules and to appoint inspectors to carry out the purposes of the Factories Act, 1948. The labour laws in general and the Factories Act 1948 in particular, are not effectively implemented and have faced many impediments in execution. This survey study focuses upon the execution of those provision of the Factories Act, 1948 which relate to double employment register of employees, employment of women and children and leave with wages. This study is based upon the survey of 100 factories (57 iron foundries and 43 engineering industries) and interview of 500 workers from these factories. Data from factories, owners, occupiers, workers, trade union leaders, lawyers and labour officials were collected through Observation, Schedule, Interview Schedule and Interview Guide.

KEYWORDS:

Execution Of Labour Laws; Double Employment; Employment Of Women; Employment Of Children; Leave With Wages.

INTRODUCTION

Labour legislation denotes a body of laws dealing with employment and non-employment, wages, working conditions, industrial relations, social security, labor welfare, etc. for working population. Labour laws are the product of Industrial Revolution which created new classes of industrial workers and industrial employers, bound with new types of formal and impersonal relationship in contradiction of informal, personal and sometimes, close family ties with the master craftsmen, artisans and their associates. This necessitated state intervention through labour laws to protect the working class from the rigour of ruthless exploitation, to start with, by enacting the Factories Act, 1948 regulating hours of work, providing for the minimum health, safety and welfare measures.

Labour being the common subject for the Centre and the States under Article 246(4) of the Constitution of India, the Central Government enacts a labour law while ensuring uniformity and parity throughout the country. The State Governments are empowered to either accept a central law, as it is, or after making suitable amendments therein or even enact their own law, considering the typical conditions of labour in their states. Besides, the State Governments are generally the chief administrative authority having powers to make rules and appoint authorities for carrying out the purposes of the legislation. The present study is specifically focused on the execution of the provisions of the Factories Act, 1948 relating to double employment, maintenance of registers of employers, employment of women and children and leave with wages.

Sharma (1979) in his paper emphasized that it is the responsibility of the factory management to look after the implementation of all the provisions of the Factories Act, 1948.

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) opined 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 indentified.

Ram (1984) studied the forms and extent to which the provisions of different legislations specifically concerned with the women labour in industrial setting are being violated in industries.

Sonarikar (1976) found that modifications in purpose occur at the implementation level, not at the law-making level. Sometimes, unintended consequences arise from legislation which can not or in any event is not fully implemented and insufficient attention has been paid to this question in our labour policy. The low importance attached to the implementation of laws has procreated many problems which have impeded the success of legislation. There has been in our set up a natural and necessary emphasis more on what the proper content of legislation should be, than on its enforcement.

Kerk (1981) observed that labour legislation, government control or regulations had hardly any impact on the working conditions of the workers in industrial units regardless of the fact that they are in the factory sector or the non-factory sector.

Jugale (1992) found that workers are being exploited mainly because legislative provisions and court awards are not being implemented by the sugar industry.

MEHODOLOGY

For this survey study, data were gathered from 100 factories (57 iron foundries and 43 engineering establishments) and 500 workers-05 workers from each factory, of Agra, Mathura, Firozabad and Mainpuri districts of Agra Division of Uttar Pradesh state of India. The factories were selected through a purposive sampling whereas workers were selected through random sampling technique. Observation Schedule, Interview Schedule and Interview Guide were used to collect data from factories, owners, occupiers, workers, trade union leaders, lawyers and officials of the labour department of Government of Uttar Pradesh.

ANALYSIS AND INTEPRETATION

Section 60 of the Factories Act, 1948 lays down that no adult worker shall be required or allowed to work in any factory on any day on which he has already been working in any other factory.

Data in table 1 shows whether double employment was permitted in the factories. Double employment was not permitted in most (84%) of the factories, of which 54.8% were foundries and 45.2% were engineering industries.

Table 1: Permission of Double Employment

S. No.	Response	Foundries	%	Engg. Ind	%	Total
1	Yes	11(19.3)	68.7	05(11.6)	31.3	16
2.	No.	46(80.7)	54.8	38(88.4)	45.2	84
	Total	57(100.0)		43(100.0)		100

Double employment was permitted in 16% of the total industries which included 68.7% foundries and 31.3% engineering industries. The table shows that double employment was not allowed in almost equal number of foundries (80.7%) and engineering industries (88.4%).

Table 2:Reasons for Permission of Double Employment

S.No.	Reasons	Foundries	%	Engg,Ind.	%	Total
1.	Day of cupola necessitates	03	60.0	02	40.0	05
2.	Allowed for part of the day	02	50.0	02	50.0	04
3.	Workers demand so	04	80.0	01	20.0	05
4.	Contractor allows	02	100.0	00	0.00	02

Data contained in table 2 depicts the reasons responsible for permission of double employment in the factories surveyed. 5% of the respondents - belonging to 60% foundries and 40% of the engineering industries, told that they permitted double employment because of necessities of the cupola day. Another 5% respondents - belonging to 80% foundries and 20% engineering industries-said that they permitted double employment because the workers demanded for the same. In 4% of the factories, double employment was allowed for part of the day. 2% of the respondents said that contractors permitted double employment to the workers employed by them.

Section 61 of the Factories Act, 1948 provides that there shall be displayed and correctly maintained in every factory, a notice of periods of work for adults showing clearly for every day the periods during which adult workers may be required to work. Notice of periods of work was displayed in 59% of the total factories, of which 64.4% were foundries and 35.6% were engineering industries. In 41% of the factories 53.7% engineering industries and 46.3% iron foundries, notice of periods of work was not displayed at all. Most (66.7%) of the foundries displayed the notice of periods of work, whereas most (51.2%) of the engineering industries did not display the notice of periods of work.

Table 3 contains data on the reasons for not displaying the notice of periods of work. 19% of the respondents - belonging to 57.9 of engineering industries and 42.1% of foundries - said that they did not display the notice of periods of work because workers inquired the same in the office of the factory. 10% of the respondents-belonging to 60% foundries and 40% engineering industries told that workers were personally informed about the periods of work.

In 5% of the factories, 60% engineering industries and 40% foundries, notice of periods of work was not displayed because either workers were unable to read the notice or they did not like to read such notices. 4% of the respondents said that they did not display the notice because contractors were responsible for fixing periods of work.

Table 3: Reasons For Not Displaying The Notice Of Periods Of Work

S.No.	Reasons	Foundries	%	Engg.	%	Total
				Ind.		
1.	Workers don't/unable to reason notice(s)	02	40.0	03	60.0	05
2.	Personally informed	05	60.0	04	40.0	10
3.	Workers inquire in the office	08	42.1	11	57.9	
4.	Workers are already aware of periods of work	02	66.7	01	33.3	03
5.	Contractors are responsible	01	25.0	03	75.0	04

A minimum (3%) of the informants said that notice of periods of work was not displayed because the workers remained already aware of the fixed periods of work as there were no frequent changes in the periods of work

Table 4: Maintenance of Register of Adult Workers

S.No.	Response	Foundries	%	Engg. Ind.	%	Total
1	Yes	52(91.2)	56.5	40(93.0)	43.5	92
2	No	05(8.8)	62.5	03(7.0)	37.5	08
	Total	57(100.0)		43(100.0)		100

Section 62 of the Factories Act, 1948 and Rule 78 of the U.P. Factories Rules, 1950 lay down that the Manager of every factory shall maintain a register of adult workers to be available to the Inspector at all times during working hours in Form No. 12. Table 4 shows that register of adult workers was maintained in 92% of the factories, of which 56.5% were foundries and 43.5% were engineering industries. Register of adult workers was not maintained in 8% of the total industries, of which 62.5% were foundries and 37.5% were engineering industries. Register of adult workers was maintained in most (91.2%) of the foundries and most (93%) of the engineering industries surveyed in this study. It was not maintained in almost an equal number of the foundries (8.8%) and engineering industries (7%).

Table 5:Period of Preserving the Register Of Adult Workers

S.N.	Period (in year)	Foundries	%	Engg. Ind.	%	Total
1	Up to 1	02	28.6	05	71.4	07
2	12	01	100.0	00	00.0	01
3	23	05	71.4	02	28.6	07
4	34	18	81.8	04	18.2	22
5	45	03	30.0	07	70.0	10
6	>5	23	51.1	22	48.9	45

Rule 78 (4) of the UP. Factories Rules, 1950 read with Section 62 of the Factories Act, 1948 lays down that register of adult workers in Form No. 12 shall be preserved for three years after the close of the year to which it relates. Table 5 shows that 45% factories - 51.1% foundries and 48.9% engineering industries - preserved the register of adult workers for more than five years. This register was preserved for 3 to 4 years in 22% of the total factories, of which 81.8% were foundries and 18.2% were engineering industries. 10% of the factories preserved the register of adult workers between 4 and 5 years. 7% industries preserved the register for 2 to 3 years and an equal number of industries preserved it up to one year only. A minimum (1%) of the factories preserved the register of adult workers for 1 to 2 years.

Table 6:Maintenance of a List of Managerial, Supervisory and Confidential Persons

S.	Response	Foundries	%	En Ind.	%	Total
No.	_					
1.	Yes	46(80.7)	63.9	26(60.5)	36.1	72
2.	No	11(19.3)	39.3	17(39.5)	60.7	28
	Total	57(100.0)		43(100.0)		100

There is statutory obligation under Section 64(1) and Rule 81 of the U. P. Factories Rules, 1950 to maintain a list of persons holding positions of supervision or management in Form No.6 in the Inspection Book, after it has been approved by the Inspector. Data contained in table 6 shows that the list of managerial, supervisory and confidential persons was maintained in 72% of the total factories surveyed, of which 63.9% were foundries and 36.1% were engineering industries. This list was not maintained in 28% of the factories, in which 60.7% engineering units and 39.3% foundries were included. The table also shows that the list of managerial, supervisory and confidential persons was maintained in most of the foundries (60.5%). However, it was not maintained in 19.3% of the foundries and 39.5% of the engineering industries.

Table 7: Reasons For Not Maintaining The List Of Managerial, Supervisory And Confidential Persons.

S.No.	Reasons	Foundries	%	Engg. Ind.	%	Total
1	Owner(s) manage(s) the	5	41.7	7	58.3	12
	factory					
2.	No need of such list	3	42.9	4	57.1	07
3.	Authorities don't ask	7	30.4	16	69.6	23
4.	Only contractors are there	6	75.0	02	25.0	08
5.	No such staff is there	1	20.0	04	80.0	05

Table 7 depicts that 23% of the factories did not maintain the list of managerial, supervisory and confidential persons because authorities did not require or ask for the same. The list was not maintained in 12% of the factories because only owners managed the factories. 8% of the respondents said that there was no need of such list because there were only contractors who employed the workers and carried out the managerial and supervisory work. This list was not needed at all in 7% of the factories, whereas there was no such staff in 5% of the total factories, of which 80% were engineering industries and 20% were iron foundries.

Table 8 contains data regarding employment of women which shows that women workers were not employed in most (87%) of the factories surveyed in this study.

Table 8:Employment Of Women

S. No.	Response	Foundries	%	Engg, Ind.	%	Total
1.	Yes	06(10.5)	46.2	07(16.3)	53.8	13
2.	No.	51(89.5)	58.6	36(83.7)	41.4	87
	Total	57(100.0)		43 (100.0)		100

Women workers were employed in only 13% of the factories, of which 53.8% were engineering industries and 46.2% were iron foundries. Most of the foundries (89.5%) and engineering industries (83.7%) did not employ any woman worker. It was asserted by the employers that child workers were not employed in any of the iron foundries and engineering industries. However, the researcher came to know that children were employed outside the main premises of the factories for carrying out some light and ancillary work.

Table 9: Reasons for Non-Employment of Children

S.No.	Reasons	Foundries	%	Engg. Ind.	%	Total
1.	Heavy and dangerous work	31	67.4	15	32.6	46
2.	Prohibition by law	50	64.1	28	35.9	78
3.	Less work for adults wages	03	75.0	01	25.0	04
4.	Burden of extra liabilities	06	75.0	02	25.0	08
5.	No work suitable to children	20	62.5	12	37.5	32
6	Adults available in abundance	02	50.0	02	50.0	04
7	Children not needed	20	55.6	16	44.4	36

Data contained in table 9 shows that 78% of the total factories - 64.1% foundries and 35.9% engineering industries - did not employ children because of prohibition of their employment by law. 46% of the respondents said that they did not employ children because of heavy and dangerous nature of work. Children were not needed at all in 36% of the factories. Work was not suitable to children in 32% of the factories, of which 62.5% were foundries and 37.5% were engineering industries. 8% of the respondents were of the opinion that children were burden of extra liabilities on them. Minimum of 4% of the respondents told that children were not employed because they did less work for adults' wages and benefits. An equal number of informants (i.e. 4%) said that they had not employed children because adults were available in abundance.

Table 10: Whether Leave with Wages Granted To the Workers

S. No.	Response	Foundries	%	Engg, Ind.	%	Total
1.	Yes	11(19.3)	68.8	05(11.6)	31.2	16
2.	No.	46 (80.7)	54.8	38(88.4)	45.2	84
	Total	57(100.0)		43(100.0)		100

Section 79 of the Factories Act, 1948 provides for annual leave with wages to every worker who has worked for a period of 240 days or more in a factory during a calendar year, calculated at the rate of one day for every twenty days of work performed in case of an adult; and one day for every fifteen days of work in case of a child. Table 10 depicts that leaves with wages were not granted in most (84%) of the factories, of which 54.8% were foundries and 45.2% were engineering industries. Leaves with wages were granted to the workers in 16% of the factories, which included 54.8% foundries and 45.2% engineering units.

Table 11: Reasons For Not Granting Leave With Wages
To The Workers.

S.No.	Reasons	Foundries	%	Engg. Ind.	%	Total
1.	No such demand from workers	7	58.3	05	41.7	12
2.	Financial inability of the factory	43	53.1	38	46.9	81
3.	Production process is hampered	21	42.9	28	57.1	49
4.	Authorities don't compel	37	64.9	20	35.1	57
5.	Not needed (other holidays are sufficient)	14	70.0	06	30.0	20
6.	Workers not faithful and don't deserve	02	50.0	02	50.0	04
7.	Workers employed by contractor	03	37.5	05	62.5	08
8.	Workers employed on contract basis by employer himself	02	66.7	01	33.3	03
9	No pay for no work	01	20.0	04	80.0	05

Table 11 mentions reasons for not granting leave with wages to the workers. 81% of the respondents showed financial inability as the reason for not granting leave with wages, which consisted of 53.1% of respondents from foundries and 46.9% from engineering industries. 57% respondents, 64.9% foundries and 35.1% engineering units told that they did not grant leave with wages because enforcement authorities did not require or compel them to

grant the same. 49% said that granting of leave with wages hampered production process adversely in the factories. Leave with wages were not provided in 12% of the factories because there was no such demand from workers. In 20% of the factories, leaves with wages were not needed as other holidays were sufficient. Other reasons were - workers employed by contractor (8%); no wage for no work (5%); unfaithful and undeserving workers (4%); and contract-basis workers (3%).

Table 12: Maintenance of Register for Leave with Wages.

S.No.	Response	Foundries	%	Engg. Ind.	%	Total
1.	Yes	53(93.0)	57.0	40(93.0)	43.0	93
2.	No.	04(7.0)	57.1	03(07.0)	42.9	07
	Total	57(100.0)		43(100.0)		100

Section 80 the Factories Act, 1948 and Rule 102 of the U P Factories Rules 1950 lay down that the manager of every factory shall keep a register in Form No 14 for leave with wages granted to the workers which shall be filled weekly or fortnightly or at least once a month. Table 12 shows that register of leave with wages was not maintained in 7% of the total factories. However, it was maintained in 93% of the factories, of which 57% were foundries and 43% were engineering industries. Most of the factories maintained leave with wages register even if they did not provide leave with wages to their workers. Rule 103 of the U.P. Factories Rules, 1950 provides that manager shall provide each worker with a Leave Book in form No.15. Data collected by the researcher pointed out that Leave Book was provided in only 5% of the total industries, whereas it was not provided to the workers in 95% of the factories, of which 57.9% were foundries and 42.1% were engineering industries.

CONCLUSIONS

- 1. Double employment was permitted in 16% of the total industrial establishments. Reasons for permission of double employment were: (i) day of cupola necessitated (5%); (ii) workers demanded so (5%); (iii) double employment was allowed for part of the day (04%); and (vi) contractors allowed double employment (2%).
- 2. Notice of periods of work was not displayed in 41% of the factories because: (i) workers inquired in the office (19%); (ii) workers were personally informed (10%); (iii) workers were either unable or did not like to read the notice (05%); (iv) contractors responsible (4%); and (v) workers were already aware of periods of work (3%).
- 3. Register of adult workers was not maintained in 8% of the factories; and 45% of the factories preserved the register of adult workers for more than five years, 15% factories preserved this register for less than three years.
- 4. 28% factories did not maintain list of managerial, supervisory and confidential persons because of the reasons: (i) authorities did not require (23%); (ii) owner(s) only manage(s) the factory (12%); (iii) only contractors are there, so no need (08%); (vi) no need of such list (07%); and (v) no such staff is there.
- 5. Women were employed in 13% industries only. No child was employed in any factory because of the reasons: (i) prohibition by law (78%); (ii) heavy and dangerous work (46%); (iii) children not needed (36%); (vi) work not suitable to children (32%); (v) burden of extra liabilities (8%); (vi) less work for adults wages and benefit (0.4%); and (vii)

adults available in abundance (0.4%).

- 6. Leave with wages was not granted to the workers in 16% factories. 7% of the factories did not maintain register for leave with wages and "Leave Book' was not provided to the workers in most (95%) of the factories surveyed.
- 7. Reasons for not granting leave with wages to the workers were: (i) financial inability of the factory (81%), (ii) authorities did not require (57%); (iii) production process was hampered (49%). and (iv) no such demand from workers.

REFERENCES

- 1. Giri. V.V. (1970). Labour Problems in Indian Industry. Bombay, India: Asia Publishing House.
- 2. Jugale, V.B. (1992). Wages, Employment and Industrial Relations of Migrant Cane Cutters in Sugar Co-operatives in Maharashtra. New Delhi, India: I.C.S.S.R.
- 3. Kerk, H.S. (1981). Employment in Small Scale Industries in South Gujarat. Economic and Political Weekly, April, 1981.
- 4. Monga. M.L. (1978). Industrial Elites and their Awareness of Labur Legislation. National Labour Institute Bulletin, Vol. IV, No. 5, pp. 211-14.
- 5. Ram, Bal. (1984). Women Workers and Labour Legislation in India. Indian Labour Journal, Vol. 25, No. 10, pp. 1527-43.
- 6. Shrama, A.M. (1979) Administration of the Factories Act in Maharashta. Indian Journal of Social Work, XL. No. 2, 1979.
- 7. Sonarikar, Sunanda. (1979) Implementation of Labour Enactments. Bombay, India: Popular Prakasan.
- 8. The Factories Act, 1948, Bare Act, 2012. Universal Law Publishing, New Delhi, India.
- 9. The Uttar Pradesh Factories Rules, 1950. Eastern Book Company, Lucknow, 2012.

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