

Status of Provisions of the Factories Act, 1948 - A Study at Vedanta Limited Pig Iron Division, Goa

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Abstract: The prime focus of this research work is to explore the status of awareness & satisfactory levels of various provisions of Indian Factories act, 1948 in the target organisation 'Vedanta Limited Pig Iron Division' located in the state of Goa. The paper attempts to describe the background of Labour Legislation in India stating next regarding its classification. The need, importance and objectives of the research study is than mentioned following which is the Literature review stated. The research targets to excavate the awareness and satisfactory levels regarding the various provisions of Factories act among the non-managerial class of employees by taking a sample of 100 employees using Simple Random Sampling method from the total population of non-managerial class of employees in the organisation. The primary data has been collected through the Questionnaire method. The questionnaire was made as simple as possible and where required it was read out & explained verbally to many of the employees by the researcher because the majority of the sample employees were not well educated. The secondary data was collected through various company publications like Annual Reports, Files and documents related to labour welfare and books, journals, research articles related to Factories Act, 1948. The results indicate that the overall awareness levels of the various provisions of the Factories Act, 1948 is moderate but the satisfactory levels with the facilities provided by the organisation seems to be adequate among the sample employees. In simple words, though the sample employees are not very much aware of the facilities they are to be provided by the Factories Act, 1948, they are being provided with adequate health. Safety & welfare measured by the organisation which is keeping the employees satisfied.

Keywords: Labour Legislation, Factories Act, 1948, Health, Safety, Welfare, Awareness, Satisfaction Levels

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I. Introduction

India's Labour Policy is mainly based on Labour Laws. The labour laws of independent India derive their origin, inspiration and strength partly from the views expressed by important nationalist leaders during the days of national freedom struggle, partly from the debates of the Constituent Assembly and partly from the provisions of the Constitution and the International Conventions and Recommendations. The relevance of the dignity of human labour and the need for protecting and safeguarding the interest of labour as human beings has been enshrined in Chapter-III (Articles 16, 19, 23 & 24) and Chapter IV (Articles 39, 41, 42, 43, 43A & 54) of the Constitution of India keeping in line with Fundamental Rights and Directive Principles of State Policy. The Labour Laws were also influenced by important human rights and the conventions and standards that have emerged from the United Nations. These include right to work of one's choice, right against discrimination, prohibition of child labour, just and humane conditions of work, social security, protection of wages, redress of grievances, right to organize and form trade unions, collective bargaining and participation in management. Our labour laws have also been significantly influenced by the deliberations of the various Sessions of the Indian Labour Conference and the International Labour Conference. Labour legislations have also been shaped and influenced by the recommendations of the various National Committees and Commissions such as First National Commission on Labour (1969) under the Chairmanship of Justice Gajendragadkar, National Commission on Rural Labour (1991), Second National Commission on Labour (2002) under the Chairmanship of Shri Ravindra Varma etc. and judicial pronouncements on labour related matters specifically pertaining to minimum wages, bonded labour, child labour, contract labour etc.

LABOUR LAWS in India are broadly classified as -

1. Laws related to Industrial Relations
2. Laws related to Wages
3. Laws related to Working Hours, Conditions of Service and Employment

4. Laws related to Equality and Empowerment of Women
5. Laws related to Deprived and Disadvantaged Sections of the Society
6. Laws related to Social Security

The Factories Act, 1948 fall in the third category of Labour Laws - Laws related to Working Hours, Conditions of Service and Employment. The objective of the Act is to ensure adequate safety measures and to promote the health and welfare of the workers employed in factories and to prevent haphazard growth of factories through the provisions related to the approval of plans before the creation of a factory. The act covers all manufacturing processes and establishments falling within the definition of 'factory' and is applicable to all factories using power and employing 10 or more workers, and if not using power, employing 20 or more workers on any day of the preceding 12 months. The Act consists of 120 Sections and 3 Schedules. Schedule 1 contains list of industries involving hazardous processes. Schedule 2 is about permissible level of certain chemical substances in work environment. Schedule 3 consists of list of notifiable diseases.

1.1 Objectives of the Study

1. To study the level of awareness and satisfaction of the sample employees regarding the various welfare measures provided under the Health Provisions of the Factories Act, 1948 at Vedanta Limited Pig Iron Division, Goa
2. To assess the level of awareness and satisfaction of the sample employees regarding the various welfare measures provided under the Safety Provisions of the Factories Act, 1948 at Vedanta Limited Pig Iron Division, Goa
3. To measure the level of awareness and satisfaction of the sample employees regarding the various welfare measures provided under the Welfare Provisions of the Factories Act, 1948 at Vedanta Limited Pig Iron Division, Goa

1.2 Need and importance of the study

Amongst the present generation teenagers, Software career is the most sought out one. It is not very surprising to know that out of any no. of students randomly chosen in any Indian city and asked a question 'Will you be interested to work in a Steel Industry when you grow up?', not even few would state that "Yes, they will be interested". The biggest reason being the very negative impression the today's teens have regarding the work environment that prevails in production industries. It is widely believed that the basic amenities are not being provided to the workers at such production industries. If the above scenario is not curtailed immediately, there may be a vacuum of quality labour in such industries and these industries would be forced to employ only the least quality labour available in the market. The need of the study is to find out the present status of awareness and satisfaction regarding the various welfare measures provided under the provisions of the Factories Act, 1948 in order to excavate the gaps that are to be filled in near future. The importance of this study is that it can play a very crucial role in filling the gaps to improve the picture of the prevailing working conditions of the labour in the production industries.

1.3 Scope of the Study

The study essentially focus on knowing the level of awareness and satisfaction of the sample employees regarding the various welfare measures provided under the Health, Safety and Welfare Provisions of the Factories Act, 1948 at Vedanta Limited Pig Iron Division, Goa. The study covers mainly the non-managerial class of employees employed at Vedanta Limited Pig Iron Division, Goa.

II. Literature Review

Researchers have done tremendous work on the studies on labour welfare, social security and related labour legislations. Some studies have determined the status of labour welfare measures, some have drawn the awareness levels, satisfaction levels, Utilization levels, some studies have excavated the influence of labour welfare on the attitudes of the employees, some studies have made a survey on the attitude, behavior of the employees and the level of satisfaction, some have thrown light on the importance of welfare measures on QWL among the employees, some studies have focused to know about the welfare programmes conducted by the industries, to assess the overall satisfaction level of employees regarding welfare programmes, to obtain correlation between statutory & non- statutory welfare activates at the industries between departments & welfare activities etc.

The following section gives a brief summary of various literature that has been referred prior and during the course of this present study to identify the research gaps and enable to make this study a relevant and meaningful one in the context of Lavour welfare and Social security.

Johri Puja & Mehrotra Sanjeev (2014) in their study to study and analyse the voluntary welfare measures provided to the employees and to study the level of awareness of employees about the various welfare measures had chosen employees from various levels of Ashok Leyland India through Simple Random Sampling and administered them with Close- Ended Questionnaires, analysed the data through percentage analysis method and found that majorly the respondents are satisfied with voluntary welfare measures provided to employees and they are also highly satisfied with their jobs.

Srinivas K.T. (2013), in his study to find out various welfare facilities provided at the company, to understand the various employee welfare measures adopted at Bosch, to find out the level of satisfaction among employees at Bosch with respective to various welfare measures, to understand the extent of awareness among the employees with various statutory and non statutory welfare measures, to suggest remedial measures if any and to improve the employee welfare measures at Bosch had chosen employees from various levels of Bosch Limited, Bangalore through Convenience Sampling and administered them with Close- Ended Questionnaires and Interviews, analysed the data through percentage analysis method and found that Bosch Limited, Bangalore is providing various facilities to their employees and also follow the rules and regulation of State and Indian Government

Regi Bulomine S., S. Golden Rahul Anthony & Franco Engine C. Dr. (2013) in their study focused on on the satisfaction level of employee welfare measures provided by Indian Overseas Bank in Tirunelveli District and to investigate whether training and development, flexible scheduling, safety and health in workplace and retirement plans are able to motivate academicians in context of Indian Overseas Bank had chosen employees from Indian Overseas Bank through Simple Random Sampling and administered them with Questionnaires, analysed the data through percentage analysis method and found that The IOB gives more welfare schemes to their staffs such as safety measures, promotion facilities, recreation facilities etc. Social security measures like workmen compensation, maternity benefit, old age benefit, medical benefit. Welfare benefit is very important. They lack canteen facilities, rest rooms and toilet facilities and ID cards.

III. Industry Profile

The **iron and steel industry** is one of the most important industries in India. During 2014 through 2015, India was the third largest producer of raw steel^[1] and the largest producer of sponge iron in the world. The industry produced 91.46 million tons of total finished steel and 9.7 million tons of pig iron. Most iron and steel in India is produced from iron ore.^[2] The Indian Ministry of Steel is concerned with: the coordination and planning of the growth and development of the iron and steel industry in the country, both in the public and private sectors; formulation of policies with respect to production, pricing, distribution, import and export of iron and steel, ferro alloys and refractories; and the development of input industries relating to iron ore, manganese ore, chrome ore and refractories etc., required mainly by the steel industry.

Pig iron is the intermediate product of smelting iron ore with a high-carbon fuel such as coke, usually with limestone as a flux. It is the molten iron from the blast furnace, which is a large and cylinder-shaped furnace charged with iron ore, coke, and limestone. Pig iron is usually used in the manufacturing of ingot and billet.

Pig iron is crude form of iron which, after smelting from its ore, has been allowed to run off into channels and moulds to solidify in the form of ingots or 'pigs' of about 3 foot long and 3 – 4 inches thick. It is of varied composition, a typical grade of pig iron containing, in addition to iron, about 4 percent carbon and 2 percent silicon together with smaller amount of sulphur, manganese and phosphorus. Some of this carbon is combined with iron; some of it is dissolved in the iron. If much of the carbon is combined, the metal has a light appearance and is known as 'White Pig Iron'. If majority of the carbon is merely dissolved or 'free', the metal appears grey and is known as 'Grey Pig Iron'. Pig iron is not malleable or ductile. It cannot be mechanically worked or welded. It can only be used as feed for the production of cast iron. Pig iron forms the starting point for the manufacture of wrought iron and steel. In the present article efforts are made to analyse the pig iron industry in India and assess its future prospects.

India is an important producer of pig iron. Post-liberalization, with setting up several units in the private sector, not only imports have drastically reduced but also India has turned out to be a net exporter of pig iron. The private sector accounted for 93% of total production for sale of pig iron in the country in 2013-14. The production for sale of pig iron has increased from 1.6 MT in 1991-92 to 7.95 MT in 2013-14. India produced 5.78 MT of pig iron in 2011-12. It is currently being traded at Rs. 22,000/t in Indian market and USD 400/t in export market. In 2010-11, import is 0.09 MT and export 0.36 MT

With the increase in demand for the long steel in the market, the demand for Pig iron increases adjacently. Demand growth will need increase in supply for which the Indian market will require more number of suppliers too. Thus, with the introduction of new players, the market is now gaining more Pig iron manufacturers. The main importing countries are Japan, Republic of Korea, Malaysia, Taiwan, Thailand, and Indonesia

3.1 Characteristics

Pig iron is broadly classified into two grades depending on the alumina-silica ratio. These are foundry grade and basic grade. Foundry grade pig iron is used to manufacture various types of iron castings and basic grade for steel making. The composition of foundry grade pig iron is given in following table no. 3.1.

Table no. 3.1 – Chemical Composition of Foundry Grade Pig Iron (Specn. No. IS: 224-79)

Material	Si	Mn	P (Max)	S (Max)
High Manganese grade (1.00-1.50)				
PG 16 Mn 5 P38	Above	1.0-1.50	0.40	0.05
PG 14 Mn 5 P38	3.75	1.0-1.50	0.40	0.05
PG 12 Mn 5 P38	3.25-3.75	1.0-1.50	0.40	0.05
PG 10 Mn 5 P38	2.75-3.25	1.0-1.50	0.40	0.05
PG 8 Mn 5 P38	2.25-2.75	1.0-1.50	0.40	0.05
PG 6 Mn 5 P38	1.75-2.25	1.0-1.50	0.40	0.05
PG 4 Mn 5 P38	1.25-1.75	1.0-1.50	0.40	0.05
Low Manganese grade (0.50 to 1.00)	0.75-1.25			
PG 16 Mn 5 P38		1.0-1.50	0.40	0.05
PG 14 Mn 5 P38	Above	1.0-1.50	0.40	0.05
PG 12 Mn 5 P38	3.75	1.0-1.50	0.40	0.05
PG 10 Mn 5 P38	3.25-3.75	1.0-1.50	0.40	0.05
PG 8 Mn 5 P38	2.75-3.25	1.0-1.50	0.40	0.05
PG 6 Mn 5 P38	2.25-2.75	1.0-1.50	0.40	0.05
PG 4 Mn 5 P38	1.75-2.25 1.25-1.75 0.75-1.25	1.0-1.50	0.40	0.05

Low sulphur low phosphorus pig iron finds extensive use in the foundry industry for the manufacture of Malleable Iron Castings and S.G. Iron Castings. The composition of low sulphur and low phosphorus pig iron is presented in following table no. 3.2.

Table no. 3.2 – Chemical Composition of Low 'S' Low 'P' Pig Iron (IS: 2841-1978)

Sub-Grade	Grade Designation	Chemical composition (%)			
		Si	Mn	P (Max)	S (Max)
A1	PG14Mn3P2K	3.25-3.75	0.5-1.0	0.04	0.02
	PG14Mn3P2K	3.25-3.75	0.5-1.0	0.06	0.02
	PG14Mn3P2K	3.25-3.75	0.5-1.0	0.08	0.02
A2	PG12Mn3P2K	2.75-3.25	0.5-1.0	0.04	0.02
	PG12Mn3P2K	2.75-3.25	0.5-1.0	0.06	0.02
	PG12Mn3P2K	2.75-3.25	0.5-1.0	0.08	0.02
A3	PG10Mn3P2K	2.25-2.75	0.5-1.0	0.04	0.02
	PG10Mn3P2K	2.25-2.75	0.5-1.0	0.06	0.02
	PG10Mn3P2K	2.25-2.75	0.5-1.0	0.08	0.02
A4	PG8Mn3P2K	1.75-2.25	0.5-1.0	0.04	0.03
	PG8Mn3P2K	1.75-2.25	0.5-1.0	0.06	0.03
	PG8Mn3P2K	1.75-2.25	0.5-1.0	0.08	0.03
A5	PG6Mn3P2K	1.25-1.75	0.5-1.0	0.04	0.03
	PG6Mn3P2K	1.25-1.75	0.5-1.0	0.06	0.03
	PG6Mn3P2K	1.25-1.75	0.5-1.0	0.08	0.03
A6	PG4Mn3P2K	0.75-1.25	0.5-1.0	0.04	0.03
	PG8Mn3P2K	0.75-1.25	0.5-1.0	0.06	0.03
	PG8Mn3P2K	0.75-1.25	0.5-1.0	0.08	0.03
A7	PG2Mn3P2K	< 0.75	0.5-1.0	0.04	0.04
	PG8Mn3P2K	< 0.75	0.5-1.0	0.06	0.04
	PG8Mn3P2K	< 0.75	0.5-1.0	0.08	0.04

Market Analysis of Pig Iron

Demand Analysis

Pig iron is consumed mainly by the iron foundry industry which serves as backbone of manufacturing and construction sectors. Therefore, demand for pig iron is associated with the growth of the iron foundry industry. The data compiled on apparent consumption of pig iron during 1980-81 to 2008-09 is furnished in following table no. 3.3.

Table No. 3.3 - Apparent Consumption of Pig Iron (In '000 tons)

Year	Production	Import	Export	Apparent Consumption
1980-81	1438	0	0	1438
1990-91	1514	189	0	1703
1993-94	2251	21	620	1652
1995-96	2873	8	503	2378
1999-00	3193	2	285	2910
2000-01	3408	2	223	3187
2001-02	4091	2	312	3781
2002-03	5285	1	629	4657
2003-04	3768	2	576	3194
2004-05	3226	8	176	3058
2005-06	4704	3	304	4403
2006-07	4995	4	707	4292
2007-08	5284	11	560	4735
2008-09	5285	8	350	4943

Source – Steel Scenario Yearbooks

IV. Company Profile

M/s. Vedanta Limited, Pig Iron Division, Amona, Goa is known for their product. The management is safety conscious, devoted for environment protection and health of their people and has taken many measures to implement the safety and objectives that management intends. Management takes measures for continuous up gradation of safety and environment in work areas as well as plant premises. It is worth noting that the employees, whom we contacted not only boosted our efforts but also helped us in completing the otherwise difficult task. The management has a regular commitment to meet the highest standards of quality goods without sacrificing Safety and Environmental regulations. The management is driven by a philosophy that Safety Excellence never stands still and a belief that the injury free workplace is the potential of every business.

When the research study was carried out, few things were observed which if management takes note of, would not only help in upgrading safety standards and boosting the moral of the employees but also will help in increasing the productivity. It is worth noting that the management has shown much enthusiasm and interest in taking corrective steps whenever any internal and external safety audits were carried out and the observations are shared. It is expected that this level of enthusiasm be further maintained.

Various good practices were noted at the premises viz. Preparation of Safety Policy has been good and it is well displayed at prominent spaces with in the organization. Safety functions in functional chart are well established. Safety Training programmes for employees, contract workers and contractors is regularly conducted. Formation of Safety Committee is in place. National Safety Day / week Celebration take place. Safety Contest for Workers is conducted. Distribution of Safety Manual in booklet form is being done to improve safety awareness. New Equipment Review System Change Control System is being followed. Hazard Identification and Risk Assessment Techniques i.e. HIRA is followed prior the jobs are carried out. Maintenance of Accident Register in Form-37 is in place. Monthly Safety Inspections of Various activities from Safety point of view are conducted. Health and Safety improvement targets being assigned to the work teams to enhance safety culture. Periodical Medical Examinations are carried out for the employees. Wide enough roads are laid for easy and safe movement of men and materials. Safe Operating Procedures (SOPs) are followed. Good Housekeeping is observed at all the places. Work permit system is in place. Mock Drills are conducted. Preparation of On-Site Emergency Plan is done. Process / Plant modification procedure is in place. Safety instructions in agreement with contractor prior work is assigned to external contractors. Strict Visitors Control is in place and Safety Induction programme for visitor is carried out prior their entry.

Manufacturing Activities

The factory started manufacturing activities about few years back. The factory manufactures Cement. Raw materials used are Iron ore, Sinter, Lime Stone, Dolomite, Metallurgical Coke etc. Machineries in use are Blast Furnace, Cooling Towers, Boilers, Truck Unloader, Conveyor, Bucket Elevator, Compressors etc. PIG Iron is the finished product coming out of this unit.

Workforce

There are a total of 250 male employees and 25 female employees who are on permanent payrolls of the company. Whereas, there are a total of 180 male employees and 15 female employees who are on contractual payrolls of the company. Altogether there are totally 275 employees on permanent payrolls of the company and a total of 195 employees on contractual payrolls of the company. The above is depicted in a tabular format in the below table no. 4.1. The factory works in all the three shifts and general shift.

Table No. 4.1 – Worker Statistics

	Company	Contract	Total
Managerial	37	9	46
Non- Managerial	238	186	424
Total	275	195	470

Source – Secondary Data

V. Research Design

5.1 Population and Sample size & Sampling Technique

Research population is all of the 424 non-managerial class employees working at the Vedanta Limited Pig Iron Division, Goa. The research sample consist a total of 100 respondents from the population of 424 Non-managerial class employees who constitute to around 23.5%. The sampling technique used is Simple Random Sampling.

5.2 Data collection and analysis method

Research data consist of Primary and Secondary data. The primary data collected through the Questionnaire method. The questionnaire was made as simple as possible for easy understanding of the sample employees. The secondary data was collected from published materials, journals, web articles and books regarding Vedanta Limited Pig Iron Division, Goa.

The Questionnaire consisted of 30 questions. 5 questions to explore each of the below -

1. Level of Awareness amongst the sample employees regarding the Welfare measures provided under the Health Provisions of the Factories Act, 1948
2. Level of Satisfaction amongst the sample employees regarding the Welfare measures provided under the Health Provisions of the Factories Act, 1948
3. Level of Awareness amongst the sample employees regarding the Welfare measures provided under the Safety Provisions of the Factories Act, 1948
4. Level of Satisfaction amongst the sample employees regarding the Welfare measures provided under the Safety Provisions of the Factories Act, 1948
5. Level of Awareness amongst the sample employees regarding the Welfare measures provided under the Welfare Provisions of the Factories Act, 1948
6. Level of Satisfaction amongst the sample employees regarding the Welfare measures provided under the Welfare Provisions of the Factories Act, 1948

Each question clearly aims at exploring any one of the above objective. The responses are collected in the form of 5-point SUMMATED LIKERT SCALE. The 5-point Scale is selected so that the results are clear and reduces unambiguous responses. The scale starts from most negative response [1] to negative response [2] to neutral response [3] to positive response [4] to most positive response [5].

The total collected Primary data consisted of altogether 3000 responses [500 responses in each category mentioned above] which were analysed using SIMPLE PERCENTILE method to derive the conclusions. The obtained percentile is then tabulated for further interpretation.

VI. Data Analysis and Interpretation

The results indicate that the **overall awareness levels** of the sample employees regarding various welfare measures provided under the Factories Act, 1948 is “**moderate**” but the **overall satisfactory levels** of the sample employees regarding various welfare measures provided under the Factories Act, 1948 is “**high**”.

The detailed interpretation of the Data Analysis is as under.

6.1 Level of Awareness amongst the sample employees regarding the Welfare measures provided under the Health Provisions of the Factories Act, 1948

The section of the questionnaire that was used to collect the primary data regarding assessment of **Level of Awareness amongst the sample employees regarding the Welfare measures provided under the Health Provisions of the Factories Act, 1948** consisted of total 5 questions. Each question had 5 choices of response marked with Nos.1 to 5 that explain the level of awareness in the ascending order from “Very low awareness” [1] to “Low awareness” [2] to “Neutral awareness” [3] to “Moderate awareness” [4] to “High awareness” [5]. “Very Low awareness” and “Low awareness” responses indicate that the Awareness is INADEQUATE. “Neutral awareness” response indicates that the Awareness is doubtful and uncertain. “Moderate awareness” and “High awareness” responses indicate that the Awareness is ADEQUATE.

Table No. 6.1 Data for assessment of Level of Awareness amongst the sample employees regarding the Welfare measures provided under the Health Provisions of the Factories Act, 1948

Level of Awareness amongst the sample employees regarding the Welfare measures provided under the Health Provisions of the Factories Act, 1948	Total Responses (in nos.)	Total Responses (in % of total respondents)
VERY LOW AWARENESS Negative Response, [=1 in LIKERT 5-point Scale]	24	4.80%
LOW AWARENESS Negative Response, [=2 in LIKERT 5-point Scale]	25	5.00%
NEUTRAL AWARENESS Neutral Response, [=3 in LIKERT 5-point Scale]	41	8.20%
MODERATE AWARENESS Positive Response, [=4 in LIKERT 5-point Scale]	354	70.80%
HIGH AWARENESS Positive Response, [=5 in LIKERT 5-point Scale]	56	11.20%

Chart No. 6.1 Bar Graph representation of Level of Awareness amongst the sample employees regarding the Welfare measures provided under the Health Provisions of the Factories Act, 1948 (in terms of No. of total respondents)

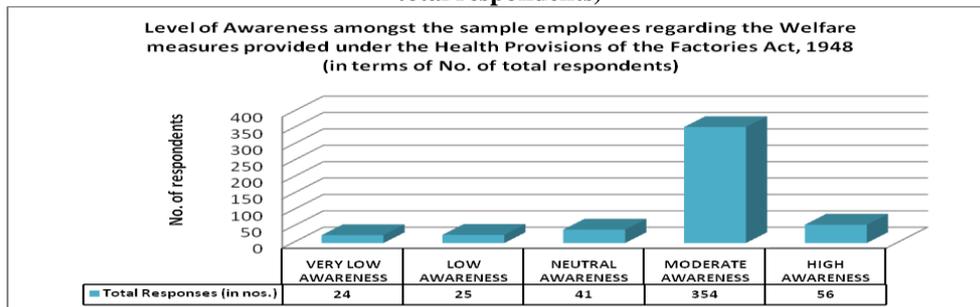
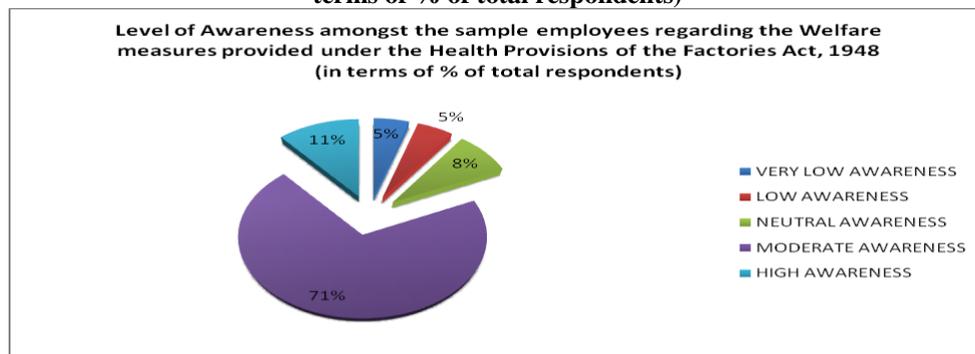


Chart No. 6.2 Pie Diagram representation of Level of Awareness amongst the sample employees regarding the Welfare measures provided under the Health Provisions of the Factories Act, 1948 (in terms of % of total respondents)



Interpretation of above Data representations

The above table shows that out of “500” responses obtained through the primary data to measure Level of Awareness amongst the sample employees regarding the Welfare measures provided under the Health Provisions of the Factories Act, 1948, a total of “24” responses fall in the “Very Low Awareness” category and a total of “25” responses fall in the “Low Awareness” category. On the contrary, a total of “354” responses

fall in the “Moderate Awareness” category and a total of “56” responses fall in the “High Awareness” category. Finally a total of “41” responses fall in the “Neutral Awareness” category.

While interpreting the results in respect of percentage of total responses, the following interpretation is possible using the Pie chart shown above. A total of “4.80%” responses fall in the “Very Low Awareness” category and a total of “5.00%” responses fall in the “Low Awareness” category. On the contrary, a total of “70.80%” responses fall in the “Moderate Awareness” category and a total of “11.20%” responses fall in the “High Awareness” category. Finally a total of “8.20%” responses fall in the “Neutral Awareness” category.

Hence, the above data clearly leads to a finding that the overall Level of Awareness amongst the sample employees regarding the Welfare measures provided under the Health Provisions of the Factories Act, 1948 is “Moderate”.

6.2 Level of Satisfaction amongst the sample employees regarding the Welfare measures provided under the Health Provisions of the Factories Act, 1948

The section of the questionnaire that was used to collect the primary data regarding assessment of Level of Satisfaction amongst the sample employees regarding the Welfare measures provided under the Health Provisions of the Factories Act, 1948 consisted of total 5 questions. Each question had 5 choices of response marked with Nos.1 to 5 that explain the level of Satisfaction in the ascending order from “Very low Satisfaction” [1] to “Low Satisfaction” [2] to “Neutral Satisfaction” [3] to “Moderate Satisfaction” [4] to “High Satisfaction” [5]. “Very Low Satisfaction” and “Low Satisfaction” responses indicate that the Satisfaction is INADEQUATE. “Neutral Satisfaction” response indicates that the Satisfaction is doubtful and uncertain. “Moderate Satisfaction” and “High Satisfaction” responses indicate that the Satisfaction is ADEQUATE.

Table No. 6.2 Data for assessment of Level of Satisfaction amongst the sample employees regarding the Welfare measures provided under the Health Provisions of the Factories Act, 1948

Level of Satisfaction amongst the sample employees regarding the Welfare measures provided under the Health Provisions of the Factories Act, 1948	Total Responses (in nos.)	Total Responses (in % of total respondents)
VERY LOW SATISFACTION Negative Response, [=1 in LIKERT 5-point Scale]	20	4.00%
LOW SATISFACTION Negative Response, [=2 in LIKERT 5-point Scale]	31	6.20%
NEUTRAL SATISFACTION Neutral Response, [=3 in LIKERT 5-point Scale]	30	6.00%
MODERATE SATISFACTION Positive Response, [=4 in LIKERT 5-point Scale]	54	10.80%
HIGH SATISFACTION Positive Response, [=5 in LIKERT 5-point Scale]	365	73.00%

Chart No. 6.3 Bar Graph representation of Level of Satisfaction amongst the sample employees regarding the Welfare measures provided under the Health Provisions of the Factories Act, 1948 (in terms of No. of total respondents)

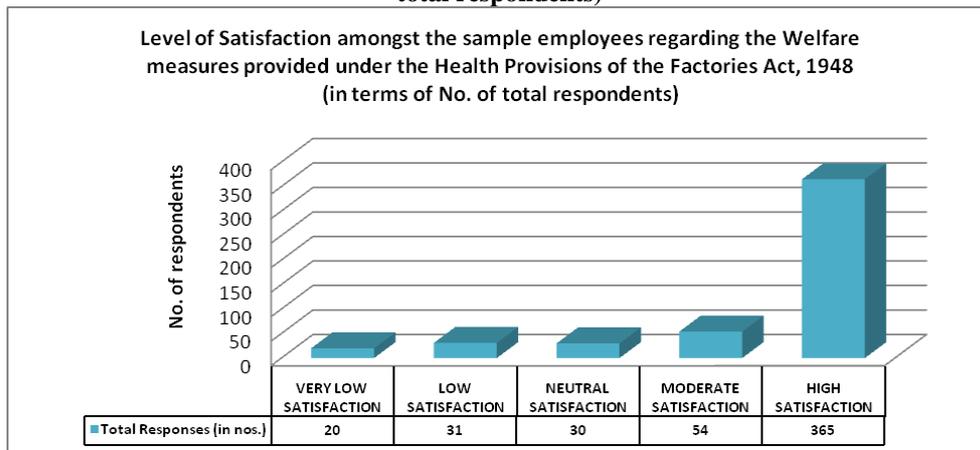
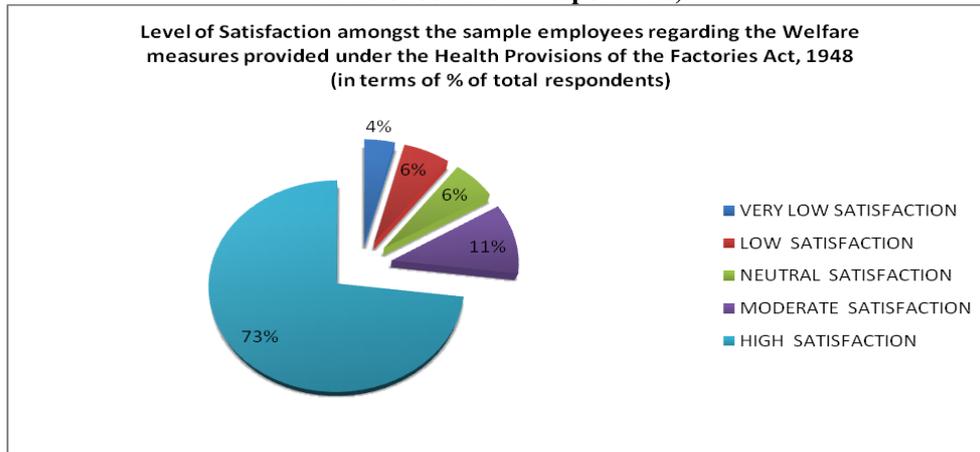


Chart No. 6.4 Pie Diagram representation of Level of Satisfaction amongst the sample employees regarding the Welfare measures provided under the Health Provisions of the Factories Act, 1948 (in terms of % of total respondents)



Interpretation of above Data representations

The above table shows that out of “500” responses obtained through the primary data to measure Level of Satisfaction amongst the sample employees regarding the Welfare measures provided under the Health Provisions of the Factories Act, 1948, a total of “20” responses fall in the “Very Low Satisfaction” category and a total of “31” responses fall in the “Low Satisfaction” category. On the contrary, a total of “54” responses fall in the “Moderate Satisfaction” category and a total of “365” responses fall in the “High Satisfaction” category. Finally a total of “30” responses fall in the “Neutral Satisfaction” category.

While interpreting the results in respect of percentage of total responses, the following interpretation is possible using the Pie chart shown above. A total of “4.00%” responses fall in the “Very Low Satisfaction” category and a total of “6.20%” responses fall in the “Low Satisfaction” category. On the contrary, a total of “10.80%” responses fall in the “Moderate Satisfaction” category and a total of “73.00%” responses fall in the “High Satisfaction” category. Finally a total of “6.00%” responses fall in the “Neutral Satisfaction” category.

Hence, the above data clearly leads to a finding that the overall Level of Satisfaction amongst the sample employees regarding the Welfare measures provided under the Health Provisions of the Factories Act, 1948 is “High”.

6.3 Level of Awareness amongst the sample employees regarding the Welfare measures provided under the Safety Provisions of the Factories Act, 1948

The section of the questionnaire that was used to collect the primary data regarding assessment of Level of Awareness amongst the sample employees regarding the Welfare measures provided under the Safety Provisions of the Factories Act, 1948 consisted of total 5 questions. Each question had 5 choices of response marked with Nos.1 to 5 that explain the level of awareness in the ascending order from “Very low awareness” [1] to “Low awareness” [2] to “Neutral awareness” [3] to “Moderate awareness” [4] to “High awareness” [5]. “Very Low awareness” and “Low awareness” responses indicate that the Awareness is INADEQUATE. “Neutral awareness” response indicates that the Awareness is doubtful and uncertain. “Moderate awareness” and “High awareness” responses indicate that the Awareness is ADEQUATE.

Table No. 6.3 Data for assessment of Level of Awareness amongst the sample employees regarding the Welfare measures provided under the Safety Provisions of the Factories Act, 1948

Level of Awareness amongst the sample employees regarding the Welfare measures provided under the Safety Provisions of the Factories Act, 1948	Total Responses (in nos.)	Total Responses (in % of total respondents)
VERY LOW AWARENESS Negative Response, [=1 in LIKERT 5-point Scale]	34	6.80%
LOW AWARENESS Negative Response, [=2 in LIKERT 5-point Scale]	21	4.20%
NEUTRAL AWARENESS Neutral Response, [=3 in LIKERT 5-point Scale]	27	5.40%
MODERATE AWARENESS Positive Response, [=4 in LIKERT 5-point Scale]	331	66.20%
HIGH AWARENESS Positive Response, [=5 in LIKERT 5-point Scale]	87	17.40%

Chart No. 6.5 Bar Graph representation of Level of Awareness amongst the sample employees regarding the Welfare measures provided under the Safety Provisions of the Factories Act, 1948 (in terms of No. of total respondents)

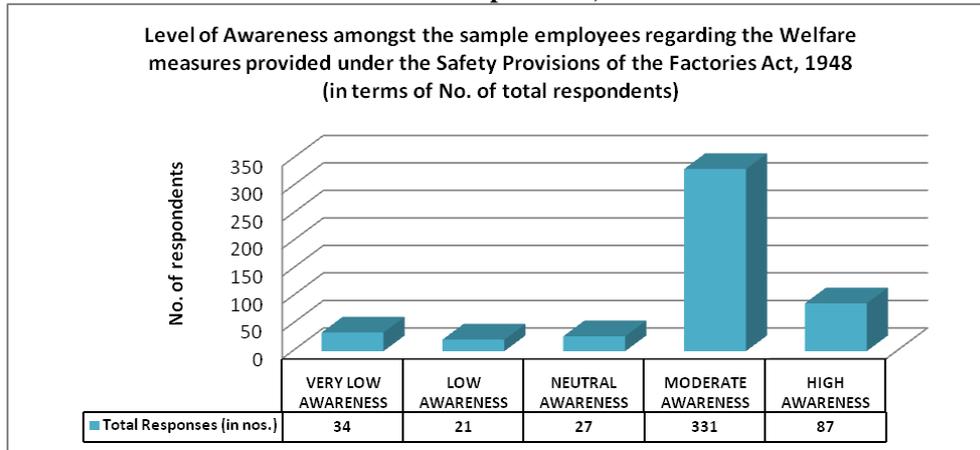
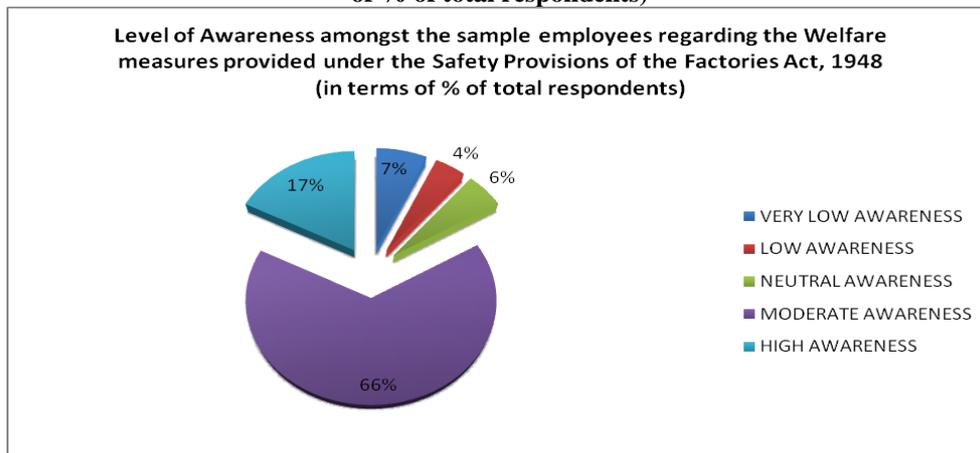


Chart No. 6.6 Pie Diagram representation of Level of Awareness amongst the sample employees regarding the Welfare measures provided under the Safety Provisions of the Factories Act, 1948 (in terms of % of total respondents)



Interpretation of above Data representations

The above table shows that out of “500” responses obtained through the primary data to measure Level of Awareness amongst the sample employees regarding the Welfare measures provided under the Safety Provisions of the Factories Act, 1948, a total of “34” responses fall in the “Very Low Awareness” category and a total of “21” responses fall in the “Low Awareness” category. On the contrary, a total of “331” responses fall in the “Moderate Awareness” category and a total of “87” responses fall in the “High Awareness” category. Finally a total of “27” responses fall in the “Neutral Awareness” category.

While interpreting the results in respect of percentage of total responses, the following interpretation is possible using the Pie chart shown above. A total of “6.80%” responses fall in the “Very Low Awareness” category and a total of “4.20%” responses fall in the “Low Awareness” category. On the contrary, a total of “66.20%” responses fall in the “Moderate Awareness” category and a total of “17.40%” responses fall in the “High Awareness” category. Finally a total of “5.40%” responses fall in the “Neutral Awareness” category.

Hence, the above data clearly leads to a finding that the overall Level of Awareness amongst the sample employees regarding the Welfare measures provided under the Safety Provisions of the Factories Act, 1948 is “Moderate”.

6.4 Level of Satisfaction amongst the sample employees regarding the Welfare measures provided under the Safety Provisions of the Factories Act, 1948

The section of the questionnaire that was used to collect the primary data regarding assessment of Level of Satisfaction amongst the sample employees regarding the Welfare measures provided under the Safety Provisions of the Factories Act, 1948 consisted of total 5 questions. Each question had 5 choices of response marked with Nos.1 to 5 that explain the level of Satisfaction in the ascending order from “Very low

Satisfaction” [1] to “Low Satisfaction” [2] to “Neutral Satisfaction” [3] to “Moderate Satisfaction” [4] to “High Satisfaction” [5]. “Very Low Satisfaction” and “Low Satisfaction” responses indicate that the Satisfaction is INADEQUATE. “Neutral Satisfaction” response indicates that the Satisfaction is doubtful and uncertain. “Moderate Satisfaction” and “High Satisfaction” responses indicate that the Satisfaction is ADEQUATE.

Table No. 6.4 Data for assessment of Level of Satisfaction amongst the sample employees regarding the Welfare measures provided under the Safety Provisions of the Factories Act, 1948

Level of Satisfaction amongst the sample employees regarding the Welfare measures provided under the Safety Provisions of the Factories Act, 1948	Total Responses (in nos.)	Total Responses (in % of total respondents)
VERY LOW SATISFACTION Negative Response, [=1 in LIKERT 5-point Scale]	16	3.20%
LOW SATISFACTION Negative Response, [=2 in LIKERT 5-point Scale]	17	3.40%
NEUTRAL SATISFACTION Neutral Response, [=3 in LIKERT 5-point Scale]	31	6.20%
MODERATE SATISFACTION Positive Response, [=4 in LIKERT 5-point Scale]	115	23.00%
HIGH SATISFACTION Positive Response, [=5 in LIKERT 5-point Scale]	321	64.20%

Chart No. 6.7 Bar Graph representation of Level of Satisfaction amongst the sample employees regarding the Welfare measures provided under the Safety Provisions of the Factories Act, 1948 (in terms of No. of total respondents)

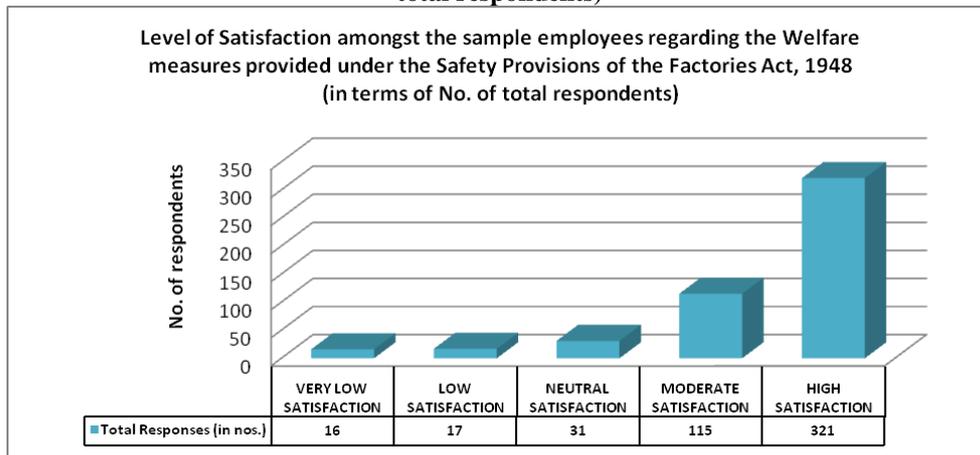
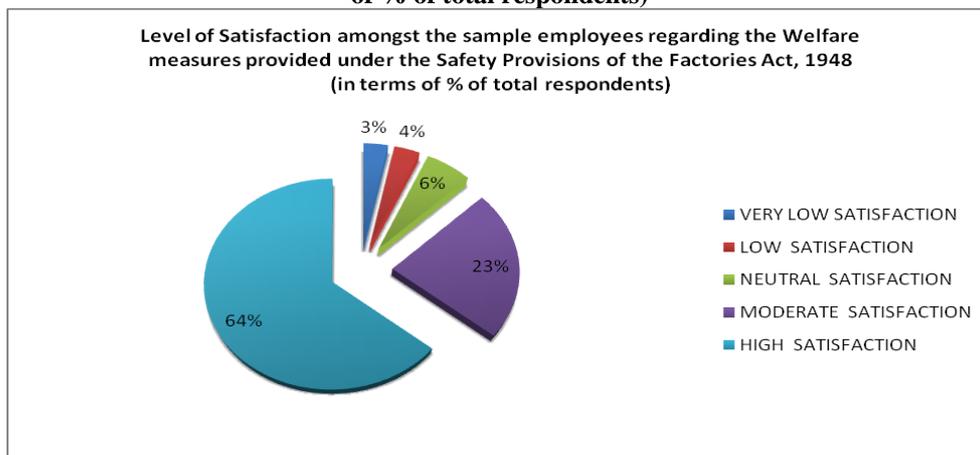


Chart No. 6.8 Pie Diagram representation of Level of Satisfaction amongst the sample employees regarding the Welfare measures provided under the Safety Provisions of the Factories Act, 1948 (in terms of % of total respondents)



Interpretation of above Data representations

The above table shows that out of “500” responses obtained through the primary data to measure Level of Satisfaction amongst the sample employees regarding the Welfare measures provided under the Safety Provisions of the Factories Act, 1948, a total of “16” responses fall in the “Very Low Satisfaction” category

and a total of “17” responses fall in the “Low Satisfaction” category. On the contrary, a total of “115” responses fall in the “Moderate Satisfaction” category and a total of “321” responses fall in the “High Satisfaction” category. Finally a total of “31” responses fall in the “Neutral Satisfaction” category.

While interpreting the results in respect of percentage of total responses, the following interpretation is possible using the Pie chart shown above. A total of “3.20%” responses fall in the “Very Low Satisfaction” category and a total of “3.40%” responses fall in the “Low Satisfaction” category. On the contrary, a total of “23.00%” responses fall in the “Moderate Satisfaction” category and a total of “64.20%” responses fall in the “High Satisfaction” category. Finally a total of “6.20%” responses fall in the “Neutral Satisfaction” category.

Hence, the above data clearly leads to a finding that the overall Level of Satisfaction amongst the sample employees regarding the Welfare measures provided under the Safety Provisions of the Factories Act, 1948 is “High”.

6.5 Level of Awareness amongst the sample employees regarding the Welfare measures provided under the Welfare Provisions of the Factories Act, 1948

The section of the questionnaire that was used to collect the primary data regarding assessment of **Level of Awareness amongst the sample employees regarding the Welfare measures provided under the Welfare Provisions of the Factories Act, 1948** consisted of total 5 questions. Each question had 5 choices of response marked with Nos.1 to 5 that explain the level of awareness in the ascending order from “Very low awareness” [1] to “Low awareness” [2] to “Neutral awareness” [3] to “Moderate awareness” [4] to “High awareness” [5]. “Very Low awareness” and “Low awareness” responses indicate that the Awareness is INADEQUATE. “Neutral awareness” response indicates that the Awareness is doubtful and uncertain. “Moderate awareness” and “High awareness” responses indicate that the Awareness is ADEQUATE.

Table No. 6.5 Data for assessment of Level of Awareness amongst the sample employees regarding the Welfare measures provided under the Welfare Provisions of the Factories Act, 1948

Level of Awareness amongst the sample employees regarding the Welfare measures provided under the Welfare Provisions of the Factories Act, 1948	Total Responses (in nos.)	Total Responses (in % of total respondents)
VERY LOW AWARENESS Negative Response, [=1 in LIKERT 5-point Scale]	19	3.80%
LOW AWARENESS Negative Response, [=2 in LIKERT 5-point Scale]	18	3.60%
NEUTRAL AWARENESS Neutral Response, [=3 in LIKERT 5-point Scale]	25	5.00%
MODERATE AWARENESS Positive Response, [=4 in LIKERT 5-point Scale]	359	71.80%
HIGH AWARENESS Positive Response, [=5 in LIKERT 5-point Scale]	79	15.80%

Chart No. 6.9 Bar Graph representation of Level of Awareness amongst the sample employees regarding the Welfare measures provided under the Welfare Provisions of the Factories Act, 1948 (in terms of No. of total respondents)

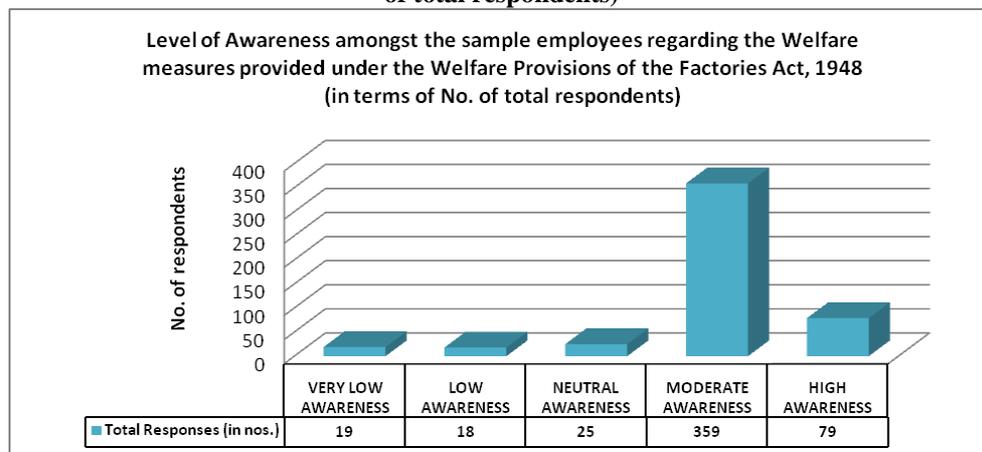
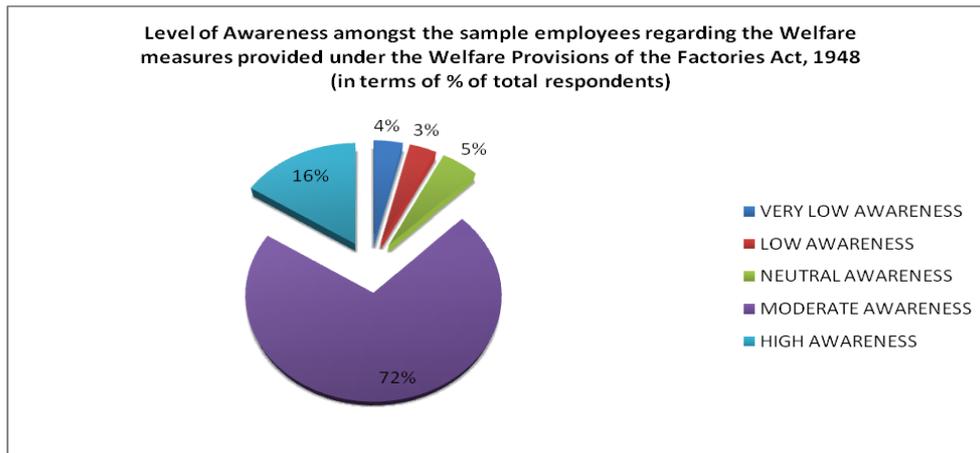


Chart No. 6.10 Pie Diagram representation of Level of Awareness amongst the sample employees regarding the Welfare measures provided under the Welfare Provisions of the Factories Act, 1948 (in terms of % of total respondents)



Interpretation of above Data representations

The above table shows that out of “500” responses obtained through the primary data to measure Level of Awareness amongst the sample employees regarding the Welfare measures provided under the Welfare Provisions of the Factories Act, 1948, a total of “19” responses fall in the “Very Low Awareness” category and a total of “18” responses fall in the “Low Awareness” category. On the contrary, a total of “359” responses fall in the “Moderate Awareness” category and a total of “79” responses fall in the “High Awareness” category. Finally a total of “25” responses fall in the “Neutral Awareness” category.

While interpreting the results in respect of percentage of total responses, the following interpretation is possible using the Pie chart shown above. A total of “3.80%” responses fall in the “Very Low Awareness” category and a total of “3.60%” responses fall in the “Low Awareness” category. On the contrary, a total of “71.80%” responses fall in the “Moderate Awareness” category and a total of “15.80%” responses fall in the “High Awareness” category. Finally a total of “5.00%” responses fall in the “Neutral Awareness” category.

Hence, the above data clearly leads to a finding that the overall Level of Awareness amongst the sample employees regarding the Welfare measures provided under the Welfare Provisions of the Factories Act, 1948 is “Moderate”.

6.6 Level of Satisfaction amongst the sample employees regarding the Welfare measures provided under the Welfare Provisions of the Factories Act, 1948

The section of the questionnaire that was used to collect the primary data regarding assessment of Level of Satisfaction amongst the sample employees regarding the Welfare measures provided under the Welfare Provisions of the Factories Act, 1948 consisted of total 5 questions. Each question had 5 choices of response marked with Nos.1 to 5 that explain the level of Satisfaction in the ascending order from “Very low Satisfaction” [1] to “Low Satisfaction” [2] to “Neutral Satisfaction” [3] to “Moderate Satisfaction” [4] to “High Satisfaction” [5]. “Very Low Satisfaction” and “Low Satisfaction” responses indicate that the Satisfaction is INADEQUATE. “Neutral Satisfaction” response indicates that the Satisfaction is doubtful and uncertain. “Moderate Satisfaction” and “High Satisfaction” responses indicate that the Satisfaction is ADEQUATE.

Table No. 6.6 Data for assessment of Level of Satisfaction amongst the sample employees regarding the Welfare measures provided under the Welfare Provisions of the Factories Act, 1948

Level of Satisfaction amongst the sample employees regarding the Welfare measures provided under the Welfare Provisions of the Factories Act, 1948	Total Responses (in nos.)	Total Responses (in % of total respondents)
VERY LOW SATISFACTION Negative Response, [=1 in LIKERT 5-point Scale]	25	5.00%
LOW SATISFACTION Negative Response, [=2 in LIKERT 5-point Scale]	33	6.60%
NEUTRAL SATISFACTION Neutral Response, [=3 in LIKERT 5-point Scale]	26	5.20%
MODERATE SATISFACTION Positive Response, [=4 in LIKERT 5-point Scale]	65	13.00%
HIGH SATISFACTION Positive Response, [=5 in LIKERT 5-point Scale]	351	70.20%

Chart No. 6.11 Bar Graph representation of Level of Satisfaction amongst the sample employees regarding the Welfare measures provided under the Welfare Provisions of the Factories Act, 1948 (in terms of No. of total respondents)

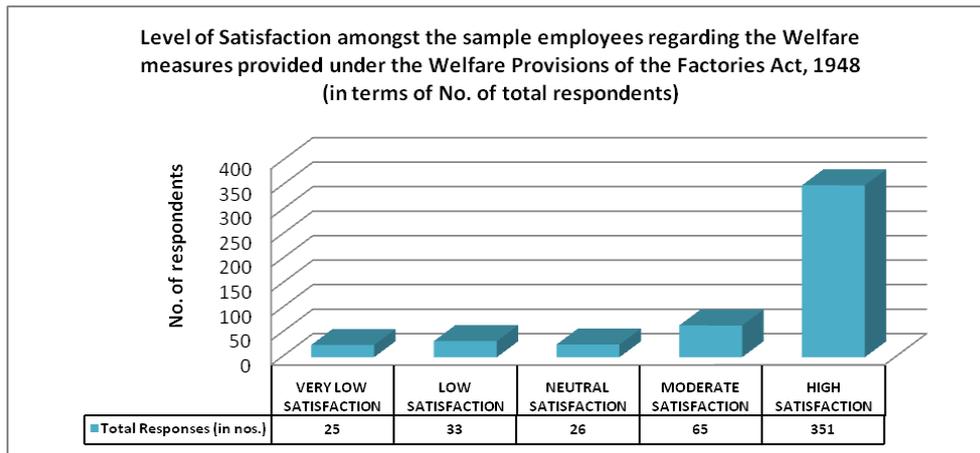
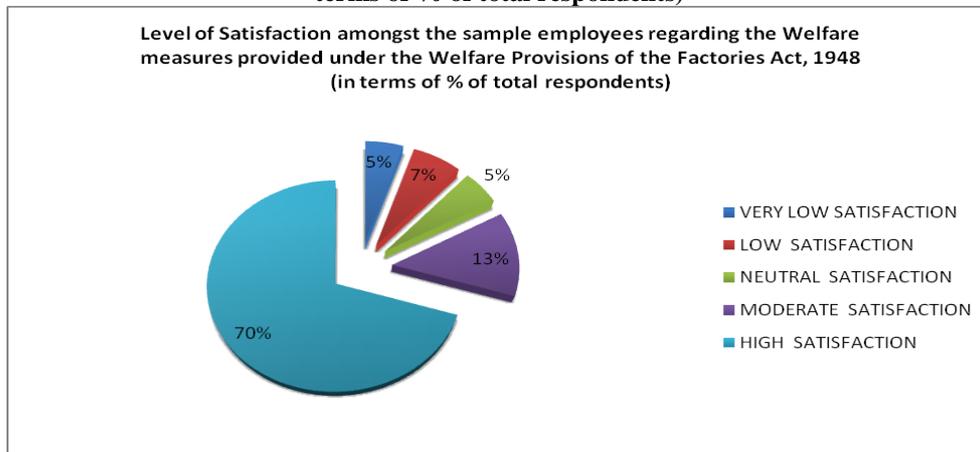


Chart No. 6.12 Pie Diagram representation of Level of Satisfaction amongst the sample employees regarding the Welfare measures provided under the Welfare Provisions of the Factories Act, 1948 (in terms of % of total respondents)



Interpretation of above Data representations

The above table shows that out of “500” responses obtained through the primary data to measure Level of Satisfaction amongst the sample employees regarding the Welfare measures provided under the Welfare Provisions of the Factories Act, 1948, a total of “25” responses fall in the “**Very Low Satisfaction**” category and a total of “33” responses fall in the “**Low Satisfaction**” category. On the contrary, a total of “65” responses fall in the “**Moderate Satisfaction**” category and a total of “351” responses fall in the “**High Satisfaction**” category. Finally a total of “26” responses fall in the “**Neutral Satisfaction**” category.

While interpreting the results in respect of percentage of total responses, the following interpretation is possible using the Pie chart shown above. A total of “5.00%” responses fall in the “**Very Low Satisfaction**” category and a total of “6.60%” responses fall in the “**Low Satisfaction**” category. On the contrary, a total of “13.00%” responses fall in the “**Moderate Satisfaction**” category and a total of “70.20%” responses fall in the “**High Satisfaction**” category. Finally a total of “5.20%” responses fall in the “**Neutral Satisfaction**” category.

Hence, the above data clearly leads to a finding that the overall Level of Satisfaction amongst the sample employees regarding the Welfare measures provided under the Welfare Provisions of the Factories Act, 1948 is “**High**”.

VII. Limitation of the Study

Many of the respondents hesitated to give the information. Few respondents hesitated to give opinion against their management. The period of the study was limited. The validity of the study depends up on the reliability of the primary data. The research has been done in only one organization and also has focused only the non-managerial class of employees. The results of the research although valid for the class of employees considered and for the type of industry and the type of company, the results may not be fully valid for the country overall. Therefore, for further research, it is suggested to involve more no. of companies covering all the regions in the country to all the classes of employees to which the Factories Act, 1948 apply for to make the results more widely applicable and valid.

VIII. Conclusion

The research study concluded that the employees at the Gerdau Steel Industries Limited are only moderately aware about the welfare measures provided under the Health, Safety and Welfare provisions of the Factories act, 1948. They are not having high insight to the welfare measures that has to be provided by the organization to them in respect of the above provisions. This is mainly because of the complicated form of text and conditions as stipulated in the factories act, 1948. The labourers are not very enthusiastic to even know the details of the provisions when they are explained. The predominantly existing mindset is that there is no direct monetary gain to them even if they are well versed with these provisions. They are more keen to know the details of those acts that will affect their monetary compensation and work hour related provisions like Provident Fund Contributions, Maternity Benefit act etc.

When it comes to determining the level of satisfaction of the sample employees, the research study concluded that the employees at the Gerdau Steel Industries Limited are highly satisfied about the welfare measures provided under the Health, Safety and Welfare provisions of the Factories act, 1948. The score is very positive in comparison to the Awareness levels. By the way of this, it can be concluded that management of Gerdau Steel Industries is doing an exceptional job in providing the facilities to its employees even though the employees are not very aware of their rights with respect to Factories Act, 1948.

References

- [1]. Dr. Udapudi Shobhalata & Mr. Sakkarnaikar Fakkires, Chronological perspective of social security in India.
- [2]. Armstrong M., Personnel Management Practice, Kogan Page Ltd, London, 1992.
- [3]. Beach D.S., Personnel: The Management of People, Macmillan Publishing Company, New York, 1980.
- [4]. Heinrich H.W., Industrial Accident Prevention, McGraw- Hill, New York, 1959.
- [5]. Martin A.O., Welfare at Work, Batsford, London, 1967.
- [6]. Warren C., Personnel Administration Manual, Kogan Page Ltd, London, 1990.
- [7]. World at work, Handbook of compensation, benefits and Total rewards, John Wiley & sons New Jersey, 2007.
- [8]. Y.L.Giri, Human Resource Management Managing people at Work 1st edition, Nirali Prakashan, Pune, India, 1990.
- [9]. Sarah Cook, Guide to employee Management, Morgan Page, UK, 2008.
- [10]. Michael Armstrong & Tina Stephen, Handbook of Employee Reward Management & Practice, Kogan Page, UK, 2005.
- [11]. John M. Ivancevich, Human Resource Management, 10th edition, MC Graw Hill, New York, 2007.
- [12]. Patrick Forsyth, How to motivate people, Kogan Page, London, 2006.
- [13]. Michael Armstrong, Handbook of Human Resource Management, 7th edition, Kogan Page, London, 1999
- [14]. Bob Marsh & Brian H. Kliener, An overview of trends in employee Benefits Programmes, Management Research News Vol 27 Number 4/5, 2004.
- [15]. Barry Cushtway, Employers Handbook, an essential guide to employment law Personal policies and procedures, Rev 5th edition, Kogan page, London,UK, 2002
- [16]. Susan E. Jackson, Randall S.Schuler & Steve Werner, Managing Human Resources, South-Western Cengage Learning , USA, 2009.
- [17]. Bell J. and Opie C., Learning from Research: Getting more from your data, Buckingham Open University Press, 2002.
- [18]. Bratt, Chartwell, Qualitative Methods in Management Research, Rutledge, London, 1998.
- [19]. Denscombe M., The good research guide: for small-scale social research projects, Buckingham Open University Press, 1998.
- [20]. Kumar R., Research Methodology: A step by step guide for beginners. (2nd edition), Sage Publications, London, 2005.
- [21]. Wolcott, Harry F., Transforming Qualitative Data: Analysis and Interpretation, Sage Publications, London, 1994.
- [22]. Bhagoliwala T.N., Economics of Labour and Industrial Relations, Sahitya Bhavan, Agra, 1981.
- [23]. C. K. Johri, Incomes Policy and Industrial Relations, Sri Ram Centre, New Delhi, 1974.
- [24]. Dr. R. G. Chaturvedi, Law of Employees Provident Funds, 2003.
- [25]. Dr. Sanjeev Kumar, Industrial and Labour Laws, 1st ed., Bharat Law House, New Delhi, 2004.
- [26]. G. B. Pai, Labour Law in India, Butterworths, New Delhi, 2001.
- [27]. G. M. Kothari, Labour Demands and their Adjudication, Tripathi, Bombay, 1977.
- [28]. Indian Law Institute, Labour Law and Labour ReUtions, ILI, New Delhi, 1968.
- [29]. K.N. Vaid, State and Labour in India, Asia Publishing House, Bombay, 1965.
- [30]. National Commission on Labour, Report, Manager of Publications, Delhi, 1969.
- [31]. O. Kahn-Freund, Labour and the Law, 3rd ed., Stevens, London, 1983.
- [32]. O. P. Malhotra, The Law of Industrial Disputes, 6th ed., Buttersworths Nexis Lexis, New Delhi, 2004.

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