STUDY ON SAFETY AND LABOUR CONDITIONS IN CONSTRUCTION INDUSTRY

Harikrishnan, V., Kannan and Ashik Ahamed

Dept. of Civil Engineering, Madha Engineering College, Kundrathur, Chennai-69, India

ABSTRACT

In the construction industry, the working environment is constantly changing, sites exist for relatively short time and the activities and inherent risks change daily. Within a short time of a hazard being identified and dealt with, typically the cork scene has changed, bringing new hazards. There is also a high turnover in the workforce, which means safety awareness is not always as good as it should be.

Keywords: construction industry, safety and labour.

INTRODUCTION

Construction Industry is an unorganized sector and it is the least researched industries even today. The system of reporting data about internal working and safety is also minimal. The manpower driven industry is facing regular accidents in daily working, which cause heavy losses in terms of men, money and time. The past studies show that on an average, 60 to 80 accidents occur per 1000 workers in the manufacturing sector while, construction sector averages around 160 to 250 per 1000 workers. In spite of all the extensive studies and efforts of various organizations working for the cause, nothing concrete has been established for the same. The main cause of the low safety standards and working conditions at the construction sites is the lack of exclusive legislations applicable to the construction industry [1-3].

Throughout the world, the construction area of civil engineering is one of the most hazardous industries. The major causes of accidents are related to the unique nature of the industry, human behavior, difficult work site conditions and poor safety management which results in unsafe work methods, equipments and procedures. However, safety is not a luxury and may be considered as an important function to be used against unnecessary loss of property, injury or

death. Preventing occupational illness and injuries should be a primary concern of all employers. Especially in developing country like India, there must be an effort to raise the level of awareness among both the employers and employees of the importance of health and safety at work sites [4-5].

It is a general observation that the large scale infrastructure projects command good safety checks and procedures due to statutory requirements of the tender contracts. But construction in everyday life comprises of large number of small scale projects which are local contractors undertakings lacking in compliance of safety requirements and labour laws. It is the high time that the awareness regarding the present scenario of safety and labour conditions should spread adequately [6-7].

NEED FOR THE STUDY

Safety in construction is a very complex phenomenon, which is not amenable to explanations, much less to control. So this study is necessary for the following reasons:

- In construction, there are no licensing conditions or other regulations. Moreover, small capital is required to control.
- Entry into the industry is easy and requires no special skills.
- The small size of many undertakings.
- Contractors are less disposed towards compliance of labour laws and safety requirements.
- Acquisition of work is by competitive tendering.
- The extensive use of migrant labours.
- The temporary nature of work.
- The seasonal nature of employment.
- Construction work is done under natural and hazardous conditions.
- Labour is bought in gangs for shorter duration and there welfare is the least interest of the contractor.

Apart from these, there is no special safety legislation applicable to the construction industry. The various aspects are covered under various laws for example, the repair workshops is covered under Factories Act, quarries under the Mines Act, vehicles by Motor Vehicles Act,

Contractor's office under Shops and Commercial Establishment Act and Contract Labour Act for labour working conditions [8-9].

The objectives of the present study are as given below:

- To study the current working conditions of construction labourers with respect to safety at construction site.
- To analyse the correlation between the age of the contractor and their commitment towards safety at construction site.
- To create awareness among the contractors regarding the importance of safe construction.

The scope of the study was restricted to R.C.C. high rise buildings which fall under the residential and commercial category type. The construction cost of the building is not considered as the decisive factor for this study.

METHODOLOGY

Methodology adopted for the study: Literature study and the study of several codes and regulations were done in order to get the parameters related to safety and labour facilities that are essential for a safe construction project. The flowchart below represents the methodology adopted for the study [10[. After arriving the criterions related to safety and labour problems preparation of questionnaire is being done.

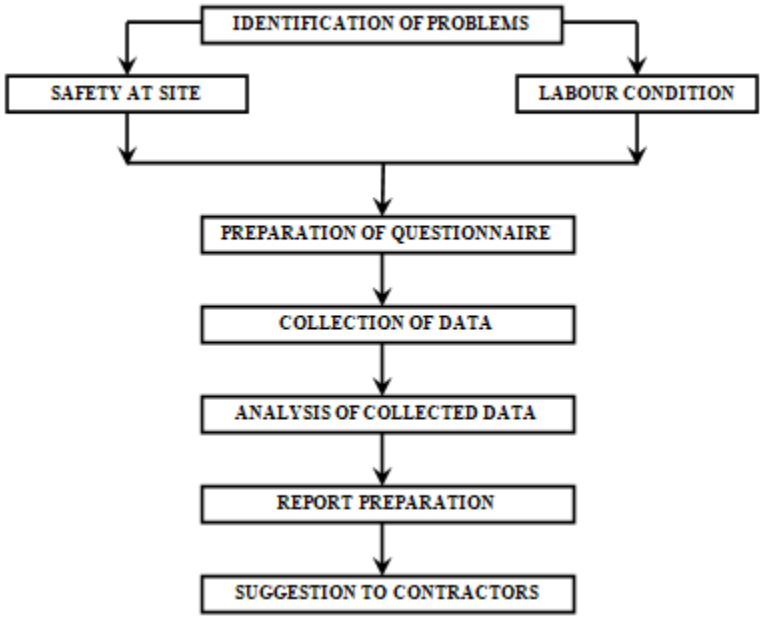

Figure 1: Methodology Adopted For Study

The questionnaire prepared consists of questions regarding the general information about the site, the details of the safety policy and program, implementation of safety program, liaison with medical facilities, information about labour, wages paid to the labour, labour welfare, records of injuries and accidents and details about the contractor. Development of questionnaire along with parameter conditions for quantification of construction safety and their weightage. This questionnaire is distributed among the construction sites and the collection of data is carried out. Finally the analysis is done for the collected questionnaire and the results are represented in graphical format. According to the response from the construction sites suggestions will be given and attentiveness regarding safety is developed. The gradual progress of the study can be represented in step by step procedure as follows,

- Perform literature review to identify significant factors related to safety and labour facilities.
- Develop a questionnaire considering the factors identified.
- Collection of data.
- Analyse the data.
- Summarize the results.

- Provide recommendations for improving construction safety.

A large number of workmen, skilled and unskilled, are employed in the numerous construction works of big and small nature. Thus, it becomes imperative that adequate safety rules should be laid down for every phase of work and that these are meticulously followed.

LABOUR LAWS: The central and state governments have enacted a large number of laws, numbering over a hundred to regulate and improve the working conditions of labour in different industrial and business establishments. Labour laws can be easily classified into the following categories:

- Laws concerning working conditions of labour.
- Laws concerning wages and other payments to labour.
- Laws concerning the social security of labour.

Some of the laws which concern the construction industry are listed in Table.

S.NO.	PUBLICATION	CODE NO.
1	Safety code for handling and storage of building material	IS 7969-1975
2	Safety code for scaffolds and ladders	IS 3696 (Part-I & II)-1987&1991
3	Safety code for working with construction machinery	IS 7293-1974
4	Safety code for excavation work	IS 3764-1992
5	Safety requirements for floor and wall openings, railings and toe boards	IS 4912-1978
6	Safety code for demolition of building	IS 4130-1991
7	National building code of India, 1983	Part-VII
8	Safety code for erection of structural steel work	IS 7205-1974
9	Steel scaffoldings	IS 2750-1964
10	Code of practice for structural use of un-reinforced masonry	IS 1905-1987
11	Code of practice for design and construction of foundations in soils: General requirements	IS 1904-1986
12	Code of practice for structural safety of buildings	IS 1875-1964

13	Safety code for blasting and related drilling operations	IS 4081-1986

Table 1: List of Indian Standard Specifications

S.NO.	LAWS
1	Workmen Compensation Act, 1923
2	Payment of Wages Act, 1936
3	Minimum Wages Act, 1948
4	Trade Union Act, 1926
5	Factories Act, 1948
6	The Contract Labour (Regulation and Abolition) Act, 1970
7	The Buildings and other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996

Table 2: Laws concerning with Construction Industry

LABOUR WELFARE

Construction workers may be broadly classified as skilled and unskilled. Usually couples are found to be working on the same worksite. Though child labour is prohibited, children are engaged for unskilled jobs. Most of the workers in this sector are employed on casual basis. Unstable employment, earnings and shifting of work places are the basic characteristics of work for construction workers. Employment in construction is usually interspersed with periods of unemployment of varying duration, mainly due to fluctuating requirements of labour force on each worksite [5,11]. The nature of work is that there are no holidays. Though skilled workers secure jobs directly from employers, unskilled workers by and large, are engaged through intermediates who introduce the workers to the contractors on a commission basis. The payment of wages is routed through the intermediaries who introduce the workers to contractors on a commission basis.The temporary residential sheds put up by contractors lack even minimum facilities such as separate cooking space, drinking water, lavatories, bathing and washing places. Crèche facilities are also not available at worksites. Social security benefits are virtually non-existence because of various constraints such as lack of stable nexus between employer and

employees, instability of employment, poor and uncertain earnings of workers and reliable duration of work and so on.

HAZARDS IN CONSTRUCTION WORK

The hazard control includes the fall of persons, materials, collapse of enabling structures, electrical and fire hazards and care in materials, machinery and equipments handling. Housekeeping is sometimes understood as "simple floor cleaning or broomstick operation". It has a wider meaning and it includes the up keep of all construction activities in an orderly manner to minimize accidents due to improper planning, placement, arrangement, handling and so on. This will not only improve the efficiency of the working system but also decreases the potential cause of accident or injury.

CONCLUSION

- Majority of the construction sites in Chennai are not having safe working environment.
- Safety is a management initiative, which was found completely lacking on all most all the sites surveyed.
- Generally, all aspects of safety are neglected at construction sites. In particular, it can be seen that the most critical factors like safety policy, awareness among the workers and falling hazards are neglected.
- Even though personal protective equipment are being used at many sites, hand glove are widely used mainly for concreting operations. Also in some sites helmets were found to be used for carrying water and storing oil which is used for applying to the formwork.

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