NOVATEUR PUBLICATIONS
International Journal of Research Publications in Engineering and Technology [IJRPET]
ISSN: 2454-7875
VOLUME 3, ISSUE 5,May -2017

A SURVEY OF ACCIDENTS IN CONSTRUCTION MANAGEMENT

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ABSTRACT:

Construction industry has become most hazardous industry in last three decade, because of the need to grow vertically. As there is no space on left on ground, the need of growing vertically arises. This has emerged as a competition amongst world renowned builders and countries to build the tallest tower in our country. It is been observed that many precaution are to be taken while building a tallest tower. Still construction manager cannot ensure, there will be zero accident. As many workers are involved from different background, as for many of the cases does not require a prior knowledge or education for some of the task in construction industry. All over the world, developing has poor record for construction site safety.

KEYWORDS: Construction, Occupational accident, Safety,

INTRODUCTION:

As mentioned and measured by international standards, construction site records are very poor in some developing countries. In this paper review of the all safety measures all over the globe and measures to improve that are taken in consideration. In this paper risk prone factors, and other safety factors that affects the construction site safety are discussed. In many of the cases it is observed that behavior of the contractors on safety concern is growing concern. This includes many factors like lack personal protective equipment, lack of training, lack of awareness. Growing demand from the workers, in a stipulated time so much task is allocated to them for completion of that they ignore the safety.

LITERATURE REVIEW:

Akhmad Suraji; A. Roy Duff; and Stephen J. Peckitt:

Accidents are inherent part of any industry especially in construction industry. The accident causation process is complex. Accident prevention requires a comprehensive understanding of this complex process. In this paper author has proposed a conceptual , but practically implementable approach and modeling of accident causation in construction industry is also being done to great extent. Various factors which are "complex interaction" are also analyzed. In this paper the theoretical findings of research currently being conducted at is worked under the UMIST. While carrying out the study both proximal and distal factors are considered (e.g. site environment, systems of work, operative factors, organization issues and project management).

A study of different 500 accidents records, available in UK safety and executive shows few factors with their share in percentage.

Table 1: various factors with their percentage share.

Sr. No	Factor	Percentage share
1	Inappropriate construction planning	28.8%
2	Inappropriate construction control	16.6%
3	Inappropriate construction operation	88.0%
4	Inappropriate site condition	6.0%
5	Inappropriate operative action	29.9%

Data tabulated in table 1, is inadequate in some respects and this needs an extension activities are need to carry out for further strengthening and finding new parameters.

Jerry G. Pigman, **Kenneth R. Agent**:

In this report documentation of the two phases of the study is been given in detail

1. Analysis of statewide accidents for the period 1983 through 1986 in which "road under construction" was listed as a contributing factors.
2. Analysis of accident data and traffic control devices used at 20 case study locations

Author has done the extensive study, while carrying out the work for this paper. Author has observed the accident data for the three consecutive years and its being compared to the period during construction. Results from the statewide analysis indicated that the level of construction maintenance activity is higher and increases in traffic volumes have increased to a great

extent in work zone accidents. The number of accidents reported as occurring in work zones has constant for three years i.e. from the period from 1983 to 1986. Its been observed by the author work zone accidents are more dangerous than any other accidents, because many times workers do not wear a safety belt and starts working on the height. Large number of accidents are also observed in rear and sideswipe accidents. Results of the case studies revealed 70% of the sites accident rates are more when construction going on as compared to before construction. Its been also observed by the author that 65% of the sites has rates during construction that exceeds statewide averages and 6 of the 14 exceeded statewide critical rates.

Xinyu Huang and Jimmie Hinze:

The OSHA organization (occupational safety and health administration) is main investigation agency worldwide which facilitates many accidents involving serious injuries. A research study was conducted which was focused on the OSHA accumulation of the data of construction worker safety and their involving falls from the height. Its been observed by the OSHA, falls are most frequent occurring types of accidents which results in many accidents, death of the worker and fatalities. The purpose of this study is identification of the root causes for the construction line workers in fall accidents. Identification of any required additional information was also being carried out for analyzing need for reducing the incidence of construction workers falls in the upcoming future. While writing this paper a data from January 1990 to 2001 was examined, particularly emphasis is given on the accidents that are occurred in last decade from current year. Study reveals that more than 95% of the accidents are happened in the height of less than 10mtr. This all accidents have occurred while erecting commercial and residential building.

Vacharapoom Benjaoran, Sdhabhon Bhokha:

In this paper a new integrated system using 4D CAD model is proposed for safety and construction management. Design information about building components and planning information for the activities is gathered and formulated 4D CAD model. The rules based system is analyzed for this combination and information to automated detect any working at height hazards and it also indicates necessary safety measure for the given activities and requirements. The safety measured considered here are visualized on the 4D CAD together with all consequences of the sequences. While implementing this paper a prototypes was developed and verification is carried out with a case study considered in the project. The results have shown that developed system can be a collaboration collaboration tool for designers, project engineers, safety officers, and other project participants. It can raise safety awareness of the team and it leads to revisions of design and plan to be consistent with safety. Safety measures are apparently on the schedule; therefore, right resources are allocated, safety constraints are considered and alleviated ahead of time, and the safety control can explicitly refer to as well. This contributes to the success of safety management in the construction industry.

CONCLUSION:

In this paper four most pioneer papers are reviews to a great extent and key factors are identified for managing the accidents in construction management. The identified factors are.

1. Construction planning
2. Construction management.
3. Construction operation.
4. Lack of training to use personal protective equipment
5. lack of safety awareness
6. lack of management support for safety

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