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Safety at Construction Project: A Review

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Abstract: ***This Paper has been prepared to assist in the importance of safety, their issues and precautions at construction projects like building, road, bridge and sewage etc. The objectives are to describe the processes or stages of safety measures to be followed at a construction project because prevention of accidents is a major aim of construction management, both for human and economic consideration. This safety measures suggest high level protocol at construction project to reducing accident, loss of time, escalation of project cost and loss of reputation of project. The report sought to determine the raw and practical safety issues observed at construction project and how to improve safety at sites so that loss of life, suffering, and damage resulting from avoidable accidents is prevented. In India, construction projects are gradually developing day by day and the fatalities or injures increased day by day according to nature of project so it is important to have an investigation and develop safety plan program.***

Keywords: Personal Protective Equipment, Health Safety and Environment, Compound Annual Growth Rate, Hazardous Material

I. INTRODUCTION

A. Research Problem

In India the construction project gradually aggrandizing which clearly indicates that the country is developing now a days. The infrastructures and construction projects plays a vigorous role in growth of any area, its may be rural or urban. Figure no.1 shows the CAGR of India construction market.



Fig.1 CAGR of 6% over Forecast Period

So for this project large number of workforce involved and it has huge number of workers follow the safety rules and instructions to reduce the fatal accidents on construction sites. But safety in construction often neglected, more manpower killed, injured and also financial loss obtain in the construction than in any other business sector. Table no.1 gives the percentage of fatal accidents and their cause in construction project.

Table.1 Percentage of Fatal Accidents and their Cause in Construction Project

SL.NO.	CAUSES	APPROXIMATE %GE OF ACCIDENT
1	Falls	36
2	Stuck by Object	10
3	Electrocution	9
4	Excavation	7
5	Caught in/between	2

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II. OBJECTIVES

Proper protocol and precaution should be taken to enhance safety on construction projects so that loss of life, suffering from ill health resulting from ignorable accidents is prevented. The necessity for polite attention towards HSE or safety aspect has become requisite for human life, project economy and other considerations.

The objective of this thesis majorly for saving life and prevent accidents at construction site and also include safety of their PPE, tools and equipment etc. and property of project.

The aim of the safety at construction project is "Prevention of Accidents" and "Zero Incident"

III. HAZARDS AT CONSTRUCTION PROJECT

Hazards are a major source of injuries and fatalities among construction workers at construction project site.

Types of hazards at construction project site are

1) Mechanical Hazards
2) Physical Hazards
3) Chemical Hazards
4) Environmental Hazards
5) Biological Hazards
6) Organisational Hazards

IV. METHODOLOGY

A. Use of PPE

The PPE is a equipment that will protect workers against health or safety risk at construction project site. All the human present at site must wear the PPE and the Safety Officer or Safety In-charge has the responsibility that everyone use the PPE at site.



Fig.1.4.1 Personal Protective Equipment (PPE)

B. Safety Measures

Prevention of injuries and damage is core aim of construction management and safety management. A Safety Officer must be employed in the construction project to eradicate the chance of excepted accidents and suffering ill health. The safety officer check and analyse the probable chance of accident in each and every activity in construction site.

C. Safety Campaign And Safety Trainings

With the increase in accident at construction project site, it is very important to conduct safety training programs and campaign by the management .Not only safety officers but also all construction team having same responsibility towards safety programs.

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V. DATA ANALYSIS

Its not only responsibility of a Safety Officer to maintain safety at site ,its also responsibility of all Construction Team. Safety is different in construction than other industry. The job role of workers change day by day and nature of work change accordingly in construction project site. Situation of work change time by time so safety is temporary in construction site. It's a great challenge for safety at new construction site.To understand the site for the aspect of safety is too diffcults.

India's 70% construction sites "unsafe"

"Even Site engineers, the master persons to oversee construction project, unaware safety"

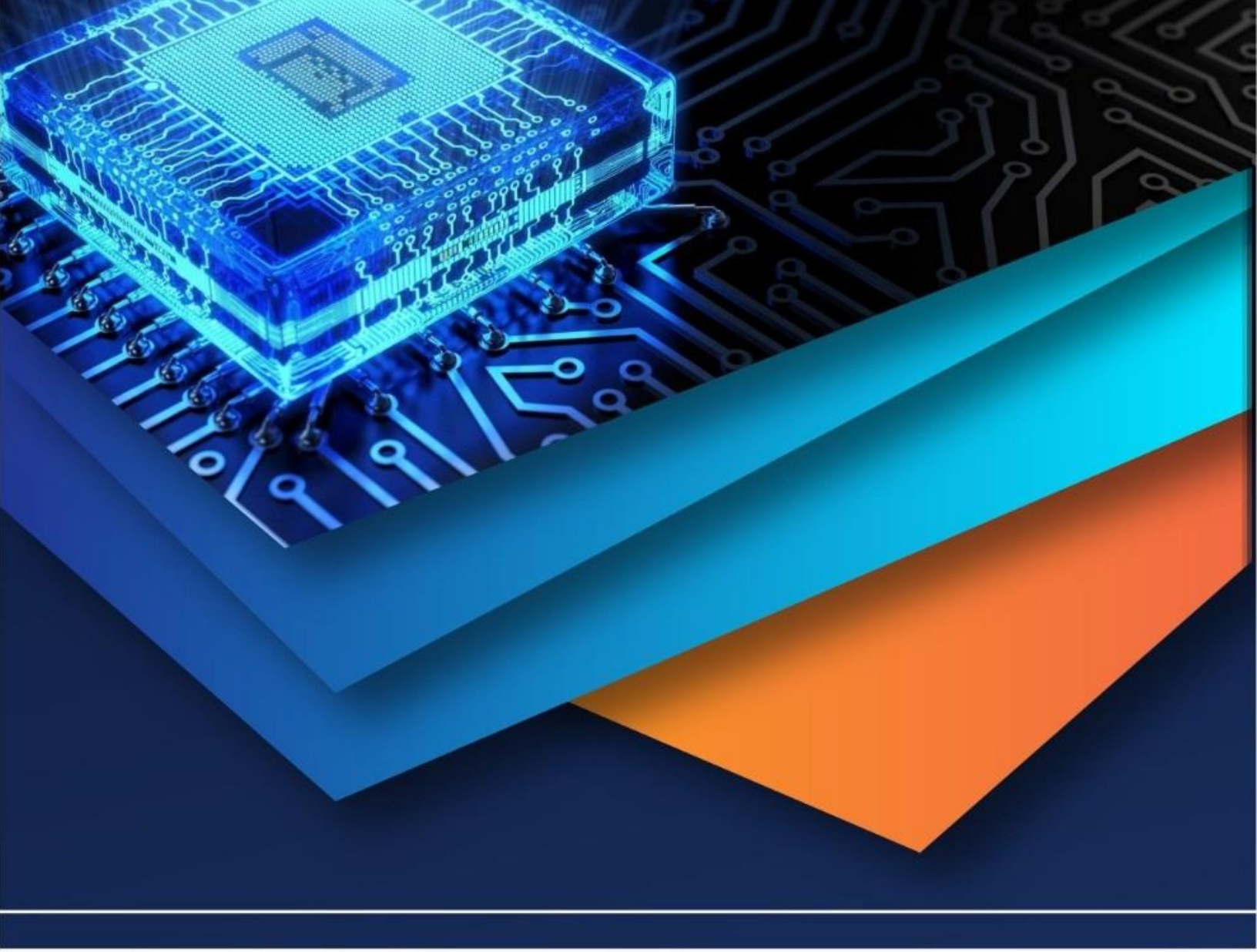
VI. DISCUSSION AND CONCLUSION

Most of fatal accident, injuries and suffering from damage including lack of awareness among workers and construction team. Many construction company and contractors refusing to provide PPE and other other safety tools at construction site.

So sad to see that Indian fathers husbands and sons are still dying in such large numbers at construction sites. The OSHA experiment in the USA is a big success reducing almost 80 percent fatalities. Would love to work with someone to develop OSHA like Central Govt. Agency, Laws and Procedures.

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