

## CHAPTER I

### INTRODUCTION

#### 1.1. Background

Construction workers have significant portion in every engineering project. They build roads, houses and also repair and maintain public infrastructures. Their jobs includes many hazardous task and condition such as work at high place, dust, electrical equipment that bring fire risk, noise, and also power tools that can be dangerous if they are used by people who does not have ability to operate them.

Construction workers have the highest possibility to experience accident, some of them experience fatal injuries during do their work in the project. The number of worker injury in Indonesia is one of the highest in ASEAN. Based on earliest BPJS data almost 32% the accident are happened at construction sector include all projects like buildings, roads, bridges, tunnels, etc. This fact clarify that labor safety need more attention, there are many factors that have to be considered to prevent the loss of accident.

Construction sector is the highest accident contributor, because of that all of construction projects need more supervision in order to decrease the amount of accident and fatal injury. The purposes of this study are to analyze the safety

management project in Yogyakarta and analyze the influence of labor safety toward project continuity.

Like mentioned before, construction sector is the highest accident contributor include all the works of buildings, roads, bridges, tunnels, etc. The higher number of accident must be increasing the loss for the project. If there are some labors that experience injury during the project it will bring some disadvantages especially for the project it self. The loss can be form as time, because more or less the accident will disturb the project construction. The second loss is about cost, because every injured labor becomes the contractor responsibility.

There are some factors that cause the accident in construction, they are:

1. The labors in construction it self
2. The construction material
3. The construction equipment
4. The Design of construction

Because there are some factors that contain of accident risk, so there are also some possibilities why the accident can be happened in the project. First is because of carelessness of the labors during they are working in the project. Second is the risk belongs of construction material, for example the dust, heat and so on. Third is the minimum safety equipment of the project, actually there is a standard about safety tools that have to be followed. For example the labors in construction have to use safety hat to cover their head from hard material. The labors also have to wear safety shoes to cover their foot and prevent slip. Eyeglasses are also needed to cover the

labors' eyes during work in place that contains dust, it is important to prevent irritation. Mask is needed to cover the respiration from dust or other danger materials. The other important safety equipment is glove to cover hand when doing work that contacted with hard material, for example is tightening bolt. The last is ear cover to cover ears from high noise that is produced by machines in project.

## **1.2. Problem Statement**

A success construction project can be shown from some consideration, first is the accuracy of time it means the project can be finished on time based on the schedule. The second is the accuracy of budget, it means the project is finished in accurate budget or does not need so many additional costs outside the plan before. The third is the number of accident during construction, the success project can be shown from the small number of accident, it means the project is already applies safety procedure well.

The accident during construction can disturb the project, because it will offend the schedule especially if the accidents cause fatal injury and happen multiple times. The accident will disturb the cost planning also while the injury labors need special medical treatment which is expensive. The cost is the contractor responsibility. The number of accident also has to be considered, because it will effect the perception or the opinion of the people about the security of the project.

There are many problems that can be founded during construction. To recognize major accident in construction, and analyze the influence of labors safety toward the project, we can make some point to analyze this problem.

1. Is there any significant impact of accident intensity toward project continuity?
2. Is there any significant impact of loss cost injury toward project continuity?
3. Is there any significant impact of lost time injury toward project continuity?
4. Is there any significant impact of accident intensity, loss cost injury, and loss time injury toward project continuity?

In order to make this thesis arrangement is directed well, the author define the scope is only the construction in Yogyakarta.

### **1.3. The Originality of Final Project**

The previous project was already observed about some kind of injury that often happen the most. This project wants to continue the result of the previous one by finding the relationship between construction accidents toward the continuity of the project. The accident during construction will bring some negative effects for the project it self, so it is important to find the main aspect that influences continuity of project the most.

Based on the references of final project in Universitas Atma Jaya Yogyakarta, final project with title A Study of The Impact of Construction Accidents on Project Continuity is never arranged before.

#### **1.4. The Objective of Final Project**

##### 1. General Purpose:

The purposes of this study are to find out and analyze the relationship between construction accidents toward the continuity of the project.

##### 2. Specific Purposes:

- a. Analyze the influence of accident intensity toward project continuity.
- b. Analyze the influence of loss cost injury toward project continuity.
- c. Analyze the influence of loss time injury toward project continuity.
- d. Analyze the influence of accident intensity, loss cost injury, and loss time injury toward project continuity.

#### **1.5. The Benefits of Final Project**

The arrangement of this final project has quite big benefits for the author also the contractors. There are some benefits of this thesis, they are:

1. For The Author: By doing this research, the author as Civil Engineer candidate that will work in civil engineering world directly can get more knowledge about the importance of labor safety and its relationship with project continuity.
2. For The Contractor: The benefit of this research is to give a comprehension for the contractor about the importance of labor safety, because construction is a work field that consist of many danger risks, so it is important to give more attention for

the labor safety, and create a better situation for working to minimize the number of accident during construction.

3. Give the information for society about the importance of safety during work and knowledge about what factors that have to be considered to prevent accident.

### **1.6. The Systematic of Report**

In this research report there are 5 (five) chapters, there are introduction, literature review, research methodology, data analysis, and discussion. The explanation of each chapter will be provided below.

Chapter I is introduction that consists of problem background, the problem statement, the originality of final project, the objective of final project, and the systematic of report.

Chapter II is a literature review that consists of explanation of any theories that become a base for the problem that want to be solved and other thing that can be used as base theory.

Chapter III is methodology of research that consists of any phases of this research or the method that is used during this research in order to solve the problem and reach the aim of this research.

Chapter VI is data analysis and the explanations that consist of the explanation about collected data also some analysis to analyze the data in order to get the expected result and solve the problem.

Chapter V is conclusion and suggestion that consists of conclusion of whole research that is already done, and also provide suggestion.

