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**IMPACT OF CRANE ACCIDENTS ON CONSTRUCTION
COST**

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of the requirements for the award of
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ABSTRACT

Crane is very familiar in the construction industry because of its physicality and functionality that are required for the construction project works. However, this machinery can contribute to the fatal accidents when the safety implementation is not applied properly by the workers on the site. As a result, this accident will affect the construction project in all important elements especially cost. The aim of the study is to identify about the cost impacts of the crane accidents for the high-rise building project especially at urban area. In addition, three research objectives have been stated for this research which are 1) to identify the factors that contribute to the crane accidents at the site, 2) to investigate the impacts of crane accidents on the construction industry that involved the cost and 3) to recommend the solutions to overcome the crane accidents. This research was done by sending questionnaires to 313 random sample respondents. The research also used the descriptive method to carry out the data analysis. According to data analysis, the top factor of crane accidents is poor inspection and maintenance of the crane. For the cost impacts of crane accidents, the findings show that the costs incurred as a result of project delays is mostly agreed by the respondents. Last but not least, most of the respondents agreed that penalty enforcement is very useful and effective solution in reducing crane accidents on the site.

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TABLE OF CONTENTS

ABSTRACT	i
ACKNOWLEDGEMENT	ii
TABLE OF CONTENTS	iii
LIST OF SYMBOL / ABBREVIATIONS	viii
LIST OF FIGURES	ix
LIST OF TABLES	x
CHAPTER 1	1
1.1 INTRODUCTION	1
1.2 PROBLEM STATEMENT	2
1.3 RESEARCH AIM	5
1.4 RESEARCH QUESTIONS	5
1.5 RESEARCH OBJECTIVES	5
1.6 METHODOLOGY	6
1.7 SCOPE OF RESEARCH	7
1.8 RESEARCH PROGRAMME	7
1.9 CONCLUSION	8
CHAPTER 2	9
2.1 INTRODUCTION	9
2.2 CONSTRUCTION ACCIDENTS	11
2.3 CRANE ACCIDENTS	13

CHAPTER 1

1.1 INTRODUCTION / BACKGROUND OF RESEARCH

Crane is one of the important machineries in construction industry. It is commonly used in construction industry like transfer the construction materials especially for the heavy construction materials such as the component of bridge, piling and others to specific point. Ali et al. (2016) also stated that crane also one of the machineries that commonly seen at the construction site because of their roles for transporting the construction materials and elements other than their physical size. Then, this is also can be used in various type of construction project especially for high-rise building project. Crane comes in various types in construction such as mobile crane, tower crane, crawler crane and others. Based on Hamid et al (2019), mobile crane is mostly used at US construction while at Europe, Mobile crane is the popular choice for construction site works.

According to Arunkumar et al. (2018), accident can be defined as unpredictable or unexpected event that is occurred at any condition. In construction industry, accidents also are occurred without any predicted especially by construction parties even they were working in safer environment. Then, construction industry accidents have higher risk and more dangerous compared to other industry (Asanka et al,2015). it is because the result of this accidents can cause heavily and severe damages to the construction parties and others at site such as civilian. It also can be caused fatal accidents. It also can be shown by DOSH (2021), fatality rate in construction industry in Malaysia is higher than other sectors which are 23 cases of fatal accidents and the total of construction accidents in 2021 are 43 cases.