

**CENTRE OF STUDIES FOR BUILDING SURVEYING
FACULTY OF ARCHITECTURE, PLANNING AND SURVEYING
UNIVERSITI TEKNOLOGI MARA**

A STUDY ON CRANE COLLAPSE IN CONSTRUCTION INDUSTRY

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**“I hereby declare that this academic project is the result of my own research
except for the quotation and summary which have been acknowledged”**

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ABSTRACT

A crane is a type of machine, generally equipped with a hoist, wire ropes or chains, and sheaves, that can be used both to lift and lower materials and to move them horizontally. It is mainly used for lifting heavy things and transporting them to other places. It uses one or more simple machines to create mechanical advantage and thus move loads beyond the normal capability of a human. Cranes are commonly employed in the transport industry for the loading and unloading of freight, in the construction industry for the movement of materials and in the manufacturing industry for the assembling of heavy equipment. One of the accidents happen in a construction site is crane collapse. Construction sites create a risk not only for the construction worker, but also for the public who move around the site or who may live adjoins them. The problem statement in this study is when cranes are wrongly constructed or operated, they may fail, crushing anything within their path. Incident crane fall in Malaysia is quite serious in the construction industry. The things such this should take serious action from the various aspects including public safety and construction workers. Although this incident is not expected to occur. The objectives of the studies are to study on crane collapse in the construction industry. Data was collected by sending a questionnaire to obtain their response on this issue such as Project Manager, Lift Operator, Crane Owner, Site Supervisor and Crane Operator. This study also to identify the factors that contributing to the crane collapse and to recommend approaches that should be taken to reduce crane collapse. The major factor that contributes to the crane collapse in construction industry is Management. If a Management that has been carried out properly and it will reduce the crane collapses. Besides that, all lifting equipment shall have an adequate factor of safety.

CHAPTER 1

INTRODUCTION

1.1 Study Background

A fatality in the construction industry continues to occur even though there is Occupational Safety and Health Administration is comprehensive. This industry features a high mortality rate ratio will be the third among the nine key financial sectors with 13.3 deaths per 100, 000 staff in 2001 (Department of Labor, 2003). Therefore, the various measures and strategies have been taken to ensure that the construction industry is capable of competitive an internationally and wide knowledgeable in the future.

One of the most important in the construction industry in Malaysia is the machinery that is used in construction. There are many types of machinery use for construction such as motorized scraper, excavators, wheel loaders, crawler tractors, dumpers, trucks and tankers, tippers, motor graders, vibratory compactor, diesel, road roller, wheeled trailer, transporter, cranes, air compressor, generating set, pumping sets, welding plants and inspection vehicles.

It will emphasize on the use of cranes and the cases involving that machinery on the construction industry. The crane may be the main machine