

UNIVERSITI TEKNOLOGI MARA PERAK BRANCH

**ADVANCED FULL-BODY HARNESS OF PERSONAL FALL
ARREST SYSTEM FOR CONSTRUCTION OF HIGH-RISE
BUILDING IN URBAN AREA**

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AUTHOR'S DECLARATION

I declare that the work in this innovation project report was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This topic has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

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CHAPTER 1: INTRODUCTION

1.1 Background of study

The construction industry is one of the pillars for a stable economy in Malaysia because construction industries involve both local and international investors for construction projects. It offers up to 9.1% of employment, for around 1.33 million people in 2017. Unfortunately, according to a research paper entitled ‘Causes of Fatal Accidents Due to Fall of Persons in Malaysian Construction Industry’ written by Nor Haslinda Abbas stated that construction industry is one of the industries that contributes a lot to economic growth within the country or called as an accident-prone sector. Construction workers are also subject to different inherent risks associated with construction site working conditions. CIDB identifies 6 common types of accidents that occurred at a construction site in Malaysia from 2015 to 2017 which are, falling from a height or falling into a dangerous location (38 cases). Struck by and hit by an object (32 cases), pinned by building materials or machinery (16 cases), electrocution (6 cases), buried under collapsed holes (5 cases), and poisonous gas (2 cases).

Based on a study conducted by Heap Yih Chong and Thuan Siang Low, falling is a critical cause of accidents that result in injury or death. A fall hazard is defined as injuries that are produced by the impact between the injured person and the source of injury when the motion that produced the contact was generated by gravity. Workers who fell from 6 feet or more above the ground level will likely be injured or even die. Examples of falls are from ground level to lower levels, or from elevation, fall through opening floor or area, fall on the same level, and jumps from structures and equipment.