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SAFETY IN PRE-CAST CONSTRUCTION

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A project report submitted in partial fulfillment of the
requirements for the award of the Degree of
Master of Science (Construction Management)

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November 2007

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Especially dedicated to my beloved family

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ABSTRACT

Safety in is one of the most important factors in any pre-cast construction project. By avoiding unnecessary delays, safety improves the project performance and hence increases the productivity in construction project. Lack of understanding of safety procedures by professionals and emergence of new accidents as a result of unpredicted hazards are the major problems facing the pre-cast construction. Therefore, Safety inspection and risk assessment is the key to successful safety management and has the potential to overcome the problem faced in pre-cast construction. This study is carried out to identify critical safety factors and hazards in pre-cast construction. The study also aims to develop safety checklists for pre-cast construction. Based on the results of questionnaire survey and interview session ,four main safety critical factors have been identified which are Transportation, Handling and Storage, Erection and General Hazards with (154) potential hazards among its different risk levels in pre-cast construction. A safety checklist was developed based on the identified hazards and verified by the experts. The developed safety checklist will help pre-cast contractors to control hazards involved in major construction activities with planed procedures to eliminate hazards.

ABSTRAK

Keselamatan adalah satu daripada faktor yang paling penting dalam mana-mana projek pembinaan paatuang. Dengan mengelakkan penundaan yang tidak perlu, keselamatan boleh memperelok pencapaian projek dan oleh yang demikian menambah produktiviti projek pembinaan. Kurangnya pemahaman para profesional terhadap tatacara keselamatan dan munculnya kemalangan baru yang berpunca daripada bahaya tak terduga adalah masalah-masalah besar yang dihadapi pembinaan pratuang. Kerana itu, pemeriksaan keselamatan dan penilaian risiko adalah kunci kejayaan pengurusan keselamatan serta berupaya untuk mengatasi masalah-masalah yang dihadapi dalam pembinaan pratuang. Kajian ini dibuat untuk mengenalpasti faktor dan bahaya-bahaya kritikal dalam pembinaan pratuang. Kajian juga bertujuan untuk membangun senarai pemeriksaan keselamatan untuk pembinaan pratuang. Berdasarkan hasil daripada tinjauan soal selidik dan sidang temubual empat faktor kritikal telah dikenal pasti iaitu Pengangkutan, Pengendalian dan Penyimpanan, Penegakan, dan Bahaya-bahaya Umum dengan (154) bahaya berpotensi didalam tingkat-tingkat risiko berbeza dalam pembinaan pratuang. Satu senarai pemeriksaan juga telah dikembangkan berdasar kan daripada bahaya-bahaya yang telah dikenalpasti dan ditentukan oleh pakar. Pengembangan senarai pemeriksaan keselamatan boleh menolong kontraktor pratuang didalam mengawal mana-mana bahaya yang terlibat dalam aktiviti utama pembinaan dengan prosedur terancang untuk menghindar bahaya.

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