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JUDUL: **BEST PRACTICES IN SAFETY MANAGEMENT FOR CONVENTIONAL CIVIL CONSTRUCTION INDUSTRY IN MALAYSIA**

SESI PENGAJIAN: 2007/2008

Saya **ROSLI BIN AHMAD**

(HURUF BESAR)

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BEST PRACTICES IN SAFETY MANAGEMENT FOR CONVENTIONAL CIVIL CONSTRUCTION INDUSTRY IN MALAYSIA

ROSLI BIN AHMAD

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

Faculty of Civil Engineering

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MAY, 2008

I declare that this project report entitled '*Best Practices In Safety Management For Conventional Civil Construction Industry In Malaysia*' is the result of my own research except as cited in the references. The project report has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

Signature : .....

Name : **Rosli Bin Ahmad**

Date : **5th May 2008**

Specially dedicated to my beloved wife, Zainum, my cheering sons, Muhammad Khairul Amirin, Iskandar Zulkarnain, Muhammad Danial, Muhammad Danish and my only and dearest daughter, Siti Fatimah.

For everlasting love and care.....

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ABSTRACT

For the past few years, poor safety records in the conventional civil construction industry has tarnished its reputation and image. In addition to that, better safety management and practices in the oil and gas construction industry as compared to conventional civil construction industry are primely due to contractual requirements and consistent drives by the clients/project owners. Hence, the aim of this study is to justify best safety practices in the oil and gas construction industry that can be adopted for the conventional civil construction industry. A total of 100 sets of questionnaire were prepared and distributed to targeted respondents from construction companies ranging from CIDB Grade G1 to G7 around localised areas such as Johor Bahru, Kuala Lumpur and part of Selangor. The feedbacks from 83 respondents were analysed using frequency and relative index analysis. Based on the survey findings, it shows an excellent trend in basic practices of construction safety management. Conversely, it shows very low commitment and concern on the importance of ERT in handling emergency situations. Finally, only 52.61% (slightly more than half) of the surveyed safety management practices implemented in the conventional civil construction industry. Overally the respondents' perceptions are in the 'agree' and 'strongly agree' categories for the levels of key elements surveyed. Whereas they perceived '5-Excellent' and only '3-Good' for levels of overall safety management and practices in oil and gas and conventional civil construction industries respectively. The six (6) interview respondents have also given the similar ratings. There is a strong need for the company management to implement the improvement measures in order to further improve the construction safety management. The respondents also tend to 'strongly agree' that implementing all the proposed measures can improve the construction safety management, safety investment is a viable and worthy effort and safety indicators implementation is low. Among recommended safety best practices are guiding policies, certifications, good HSE plannings, programs, rules and practices, safety indicators and safety campaigns and celebrations.

ABSTRAK

Untuk beberapa tahun yang kebelakangan ini, rekod-rekod keselamatan yang buruk dan kurang memuaskan yang dicatatkan telah banyak merosakkan reputasi dan imej kepada industri pembinaan awam konvensional. Selain dari itu, pengurusan dan amalan keselamatan yang lebih baik di industri pembinaan minyak dan gas jika di bandingkan dengan di industri pembinaan awam konvensional adalah terutamanya disebabkan oleh kehendak-kehendak kontrak dan usaha yang konsisten oleh pihak klien/pemilik projek. Oleh itu, tujuan kajian ini adalah untuk mengenalpasti amalan-amalan pengurusan keselamatan yang terbaik di industri pembinaan minyak dan gas yang boleh diadaptasikan ke industri pembinaan awam konvensional. Sebanyak 100 set kertas soal-selidik telah diedarkan kepada responden daripada firma-firma pembinaan berkelas CIDB gred G1 ke G7 disekitar Johor Bahru, Kuala Lumpur dan Selangor. Maklumbalas dari 83 responden telah dianalisa menggunakan kaedah frekuensi dan indeks relatif. Hasil kajian mendapati terdapat tren yang cemerlang dalam amalan keselamatan yang asas. Sebaliknya pula, terdapat komitmen yang sangat rendah dari segi kepentingan menangani situasi kecemasan. Hanya 52.61% sahaja daripada amalan-amalan keselamatan yang disoalselidik telah digunapakai di industri pembinaan awam konvensional. Secara puratanya, persepsi responden adalah 'setuju' dan 'sangat setuju' terhadap tahap elemen-elemen keselamatan yang telah disoalselidik. Dimana mereka memberikan '5-cemerlang' dan '3-baik' bagi tahap keseluruhan pengurusan dan amalan keselamatan di industri pembinaan minyak dan gas dan awam konvensional masing-masing. Enam responden yang telah ditemuduga juga memberikan tahap yang sama. Responden. juga 'sangat setuju' bahawa menggunapakai semua cadangan penambaikan oleh pengurusan syarikat akan meningkatkan lagi tahap pengurusan keselamatan. Antara amalan-amalan keselamatan yang terbaik untuk digunapakai adalah polisi keselamatan, program keselamatan yang baik dan kempen keselamatan serta sambutan 'Hari Keselamatan'.

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ABBREVIATIONS	FULL NAME
CIDB	Construction Industry Development Board of Malaysia
DOSH	Department of Occupational Safety and Health Malaysia
NIOSH	National Institute of Occupational Safety and Health
NCOSH	National Council For Occupational Safety and Health
OSH	Occupational Safety and Health
OSHMS	Occupational Safety and Health Management System
HSE	Health Safety and Environment
PPE	Personal Protection Equipments
SHO	Safety and Health Officer
OSHA	Occupational Safety and Health Act
DFM	Department of Factory and Machinery
ILO	International Labour Organisation
OHSAS	Occupational Health and Safety Assessment Series
ISO	International Standard Organisation
SPSA	Self Performance Self Assessment
OSFAM	Offshore Structures Fabricators Association of Malaysia
JSA	Job Safety Analysis
QA/QC	Quality Assurance/Quality Control
DOE	Department of Energy (United States of America)
IPO	Intervention Preventive Observation
NOSP	NIIOSH-OSFAM Safety Pass