THE INSTITUTION OF ENGINEERS, MALAYSIA

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Talk on

"IMPLEMENTATION OF PERFORMANCE BASED DESIGN FOR OFFSHORE STRUCTURES IN BLAST DESIGN DUE TO HYDROCARBON EXPLOSION"

(Organised by** Marine Engineering and Naval Architecture **Technical Division IEM)

BEM Approved CPD/PDP Hours: Ref No: IEM12/HQ/099/T

Date : **26th May 2012 (Saturday)**
Time : **09.00am – 11.00am** *(Refreshments will be served at 8.30am)*
Venue : **TUS Lecture Room 02nd Floor**
Wisma IEM, Petaling Jaya
Speaker : **Ir. Dr. Rafee Makbol Mohamed Ali**

SYNOPSIS

Topsides structures of offshore installations have to support heavy process plant dealing with large volume of oil and gas under high pressure. Many of these platforms have to be operated in very remote areas in a harsh environment with little infrastructure. It is therefore necessary to design these high risk installations to various types of extreme loadings. One of these scenarios is blast loading from a possible hydrocarbon explosion. Although this is a comparatively low frequency accidental event, it has the capability to cause major fatalities to personnel and serious structural damage which could lead to a complete loss of the platform.

At present, most topsides structures are designed based upon working stress design (WSD)/ load resistance factor design which is quite safe but not economical due to uncertain extent of the levels of protections. For these reasons, a Performance Based design methodology is proposed that emphasizes the structure predictable behavior and protection of personnel and assets. The end result will be an optimum design which satisfies the function of a topsides structure system without compromising safety.

BIO DATA OF SPEAKER

Ir. Dr. Rafee Makbol Mohamed Ali

He is a Structural Engineer with over 20 years of experience in designing offshore structures for oil & gas and wind farm installations. He started his career working in fabrication line constructing Topsides and Jacket structures. He then joined several design consultant companies in Kuala Lumpur prior to pursuing his research study on hydrocarbon explosions with the Department of Civil and Environmental Engineering at Imperial College London. He then later joined Atkins Energy Renewable team in Epsom England as lead design engineer for development of wind farm substations and metrological platforms. At present, he is the team leader and lead structural specialist for Lloyd's Register of Shipping (M) Bhd based in Kuala Lumpur.

ANNOUNCEMENTS TO NOTE:

1. Talk is **STRICTLY** for IEM members only (pre-registration is **NOT** required)
2. Telephone and/or fax reservation will **NOT** be entertained
3. Limited seats available on a "first come first served" basis (maximum 110 participants).
4. IEM members are required to produce your membership cards for confirmation of attendance (CPD purpose).
5. Latecomers will not be allowed to enter if the lecture hall is full nor be entitled to CPD.

IEM members who fail to produce their membership cards will be charged a fee of RM20.00.

FUNDS FOR IEM BUILDING FUND (WISMA IEM)

- **Kindly be informed that IEM will be charging participants RM10.00 administrative fee for talks organized by IEM.**
- **The fee would be used for overhead costs, building maintenance expenses as well as to support the purchase of the new building.**
- **All contributions will be deeply appreciated by IEM**
- **Students are however exempted.**
  Your understanding is greatly appreciated.

CPD HOURS CONFIRMATION

Name: .....

Membership No: .....

Signature: ……..……..

Date : **26 May 2012**

First Admiral Dato' Ir. Hj Ahmad Murad bin Hj Omar (Rtd)
Chairman
Marine Engineering and Naval Architecture Technical Division IEM