

# THE INSTITUTION OF ENGINEERS, MALAYSIA

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#### TALK ON CIVIL, STRUCTURAL & PIPELINE ENGINEERING IN OIL & GAS INDUSTRY

(Organized by Oil, Gas and Mining Technical Division, IEM)

#### DATE : 13 NOVEMBER 2010 (SATURDAY)

TIME : 9.00 AM TO 11.00 AM (Refreshment will be served at 8.30 am .)

VENUE : TUS ROOM, WISMA IEM, PETALING JAYA

SPEAKER : IR. MOHD NAZRI MUSTAFA, EN ZULHILMI LIHIN, EN. A SIRWAN M TUSELIM

## **SYNOPSIS**

### Civil (Onshore) Engineering - Seismic evaluation.

With frequent earthquake occurring in the region, it becomes important for plant owner to assess the seismic resistance of the existing major structures. In this presentation, a case study will be presented with the objective to share with the participants, the methodology, inspection methods, analysis and result of the assessment.

#### Structural (Offshore) Engineering - Ultimate Strength Analysis.

Platforms of all exposure categories, either by passing or not passing the requirements for screening and/or design level analysis, must demonstrate adequate strength and stability to survive the ultimate strength loading criteria to ensure adequacy for the current or extended use of the platform. Special attention should be given to modeling of the deck should wave inundation be expected. Ultimate strength analysis reduces conservatism, attempting to provide an unbiased estimate of platform capacity. One of the methods of analysis is by using inelastic, static pushover analysis.

#### Pipeline Engineering – Fitness for Service Study.

The assessment is directed towards the current level of integrity for the pipeline & identifies & assesses options that will ensure the ongoing fitness for service. The assessment of the pipeline condition & the fitness for purpose, relating to corrosion/ wall loss defects, is based on DNV RP-F101 "Corroded Pipelines" (Part A & B) or equivalent.

Corrosion rates are estimated to facilitate projection of the effects of each respective corrosion defect on the pipelines Maximum Allowable Operating Pressure & Operating Pressure over the time.

#### Author 1

#### **BIODATA OF SPEAKERS**

Ir Mohd Nazri Mustafa is currently a Principal Civil Engineer with Petronas Group Technology Solutions. He has more than 18 years of experience in Oil & Gas industry. He has a Bachelor of Civil Engineering from The University of Wollongong, Australia. He is a Professional Engineer registered with the BEM.

#### Author 2:

En Zulhilmi Lihin is currently a Senior Structural Engineer with Petronas Group Technology Solutions. He has more than 8 years of experience in Offshore Engineering. He has actively involved in RBI Assessment, Structural Reliability & Integrity, design & construction of offshore platforms.

#### Author 3:

En A Sirwan M Tuselim is currently a Principal Pipeline Engineer with Petronas Group Technology Solutions. He has more than 20 years of experience in Pipeline Engineering. He has a Bachelor of Mechanical Engineering from University of Strathclyde, Scotland. His specialization is in FFS, RBI and Pipeline Integrity Management.

| IR. AL-KHAIRI MOHD DAUD<br>Chairman,   | BEM Approved<br>CPD/PDP HOURS: 2                   |
|--|--|
| Oil, Gas and Mining Technical Division   | Ref No: IEM 10//HQ/321 /T                          |
| Announcement to note:         1.       Talk is STRICTLY for IEM Members only (pre-registration is NOT required)         2.       Limited seats available on a "first come first served" basis (maximum 100 participants)         3.       Telephone and/or fax reservation will not be entertained         4.       Latecomers will not be allowed entrance, if the lecture hall is full         5.       Please bring along this flyer for confirmation of attendance (CPD purpose)         For IEM members, membership cards MUST be presented for identification purpose. Members who fail to show their membership | hip card will be charged a fee of <b>RM</b> 20.00. |
| <u>FUNDS FOR WISMA IEM</u><br>Kindly be informed that IEM will be charging participants RM10.00 administrative fee to talks organized by IEM. The fee would be used for overhead costs, building<br>maintenance expenses as well as to support the purchase of the new building.<br>Students are however exempted. Your understanding is greatly appreciated.  |  |
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