

# The Institution of Engineers, Malaysia

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## Talk on

## **Overview of External Turret Design For FPSO/FSO Mooring System**

(Organised by Oil, Gas & Mining Technical Division, IEM)

Date	: 19 <sup>m</sup> May 2018 (Saturday)
Time	: 9.00am to 11.00am (Refreshment will be served at 8.30am)
Venue	: TUS and C&S Lecture Room, 2 <sup>nd</sup> Floor, Wisma IEM, Petaling Jaya
Speaker	: Mr. Mohd Akmal Abu Hassan and Ir. Mohd Azwira Mohd Azmi

### **SYNOPSIS**

Malaysia is emerging as a major deep-water oil and gas production hub. Starting from 1998, the first weathervane FPSO was installed named FPSO Perintis. Continually, the weathervane mooring type FPSO was constructed and installed such as Bunga Kertas, FPSO Kikeh and the latest is FSO Bergading mainly external turret anchored. The water depth is range from 60m to 1300m water depth.

This presentation will cover the engineering aspects of an external turret system. The external turret system is attached to the hull of the tanker and allows the tanker to freely weathervane and thereby takes up the least resistance to the combined forces of wind, waves and current. The external turret mooring system is composed of a stationary turret part connected to the external vessel's structure via a roller type bearing. The turret part is secured to the seabed by catenary or (semi) taught mooring legs to provide sufficient restoring forces to keep the vessel within a design excursion limit. This excursion limit ensures the safe working of the underwater fluid transfer riser system from the seafloor to the turret.

### SPEAKERS' BIODATA

#### Mr. Mohd Akmal Abu Hassan

Turret Lead Engineer by designation, Mohd Akmal Abu Hassan has been working with various FPSO provider and client since the past 13 years. Previously, he has worked with APL (NOV) which also is a major contractor of FPSO/FSO turret systems such as submerged turret production (STP), submerged turret loading (STL) and stern discharge system (SDS). He was also employed by SBM Offshore which is the largest FPSO provider in the world before continuing his career with ENI and SP Oil & Gas as a Turret Lead Engineer. He has also worked in Italy for several years with an Italian engineering design consultancy. He graduated in 1997 with Bachelor of En gineering from the University of Liverpool and is a master's degree holder in Marine Technology from Universiti Teknologi Malaysia.

### Ir. Mohd Azwira Mohd Azmi

Ir. Mohd Azwira Mohd Azmi is an engineer in Malaysia Marine Heavy Engineering which is the major contractor in the offshore oil & gas industry. Its product range covers the construction Floating Production, Storage and Offloading Systems (FPSO), Floating Storage Offloading (FSO) systems and all types of Mooring Systems (shallow to very deep water). MMHE also is the EPCIC contractor for offshore platform. Previously he also worked with SBM Offshore Malaysia with his last post as Engineering Project Manager for various FPSO/FSO projects. He has been deeply involved in FSO and FPSO projects especially in external turret design. Ir. Azwira graduated with Bachelor of Engineering in Mechanical Engineering from the Universiti Kebangsaan Malaysia. He is a Professional Engineer and is a member of the Institute of Engineers Malaysia.

Ir. Azwira Mohd Azmi Chairman. Oil, Gas and Mining Technical Division **BEM Approved CPD/PDP Hours: 2** Ref. No. : IEM18/HQ/180/T

## FEE ANNOUNCEMENT

(Effective: 1st October 2017)

#### Members:

(i) Registration Fee: No Charge (ii) Administrative Fee: (a) Online **RM15** (b) Walk-In **RM20** 

#### Non-Members:

(i) Registration Fee: RM50 (ii) Administrative Fee: RM20

- Limited seats are available on a "first come first served" basis (maximum 100 participants).
- To secure your seat, kindly register online at <u>www.myiem.org.my</u>

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