Talk on "Offshore Project Journey – Engineering Roles Beyond Detail Design"
by Ir. Razak Yakob

Ir. Razak Yakob is currently the Secretary/Treasurer in the Oil, Gas and Mining Technical Division (OGMTD).

To many Malaysian engineers, oil and gas engineering is a relatively new field of employment offering attractive pay packages. Until recently it has always been the growth industry, much to the envy of many engineers working in non oil and gas industry.

So what is it like to be an oil and gas engineer? The IEM Oil, Gas and Mining Engineering Technical Division (OGMTD) organized a talk on "Offshore Project Journey – Engineering Roles Beyond Detail Design" on 14 March 2015 at the Tan Sri Prof. Chin Fung Kee Auditorium. Chaired by Ir Razak Yakob, the talk was attended by 92 IEM members.

Ir. Tengku Fadziliaton was the speaker. She is a senior process engineer in development department at Kebabangan Petroleum Operating Company. Graduated in chemical engineering from Loughborough University of Technology, she has 17 years of working experience in oil and gas industry. She has participated in detailed design, fabrication, commissioning and operation as a process engineer. Besides that, she is part of the operation support team that has responsibility over wellhead platforms, processing platforms, and floating production storage and offloading (FPSO) unit.

The objective of the talk was to provide a brief insight into the work of a typical oil and gas engineer involving in offshore project from front end engineering design (FEED), detail design, procurement, and fabrication up to commissioning. More specifically, the aim was to familiarize the participants on the project stages.

Ir. Tengku Fadziliaton discussed her experience acquired on the eight (8) project stages:

1. FEED,
2. Detailed design,
3. Procurement,
4. Construction,
5. Onshore commissioning,
6. Offshore installation,
7. Offshore commissioning,
8. Handover to operations.

As a lesson learned, she emphasized that a complete team headed by the project manager must work together from beginning to end. In addition, each team has an area expert in process, instrument, mechanical, electrical, piping, structural, plant design management system (PDMS), and coordination and safety.

Some of the challenges that are common in a project are: deviation; late delivery of vendor data; late construction; deviation from equipment specification; equipment failure during trial; and

changes of the fluids parameters. Indeed deviation can be very expensive in any project. In order to minimize changes, it is important to include adequate margin during design, use standard and proven system, consideration of other disciplines, maintain accuracy of the design as built, ensure continuous update, and use latest flow diagram. A good practice according to Ir. Tengku Fadziliaton is to check, check and recheck the design and analysis.