Technical Talk on Floating Production, Storage and Offloading (FPSO) Vessel

MARINE ENGINEERING AND NAVAL ARCHITECTURE TECHNICAL DIVISION

reported by
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Speaking about oil platforms, many are aware of such structures that sit on the seabed. However, when the demand for oil exploded in the 1970s, floating production systems were found to be more feasible in meeting the demand of oil fields located in deeper waters and far away from shores.

The first oil floating production, storage and offloading (FPSO) vessel was built in Spain in 1977 according to Wikipedia. Worldwide, more than 270 such vessels are in operation as oil FPSO vessels.

In order to expose IEM members to the basic structural design principles of an FPSO vessel, the IEM Marine Engineering and Naval Architecture Technical Division (MNATD) organised a 2-hour talk on March 18, 2015, which was attended by 40 members.

It was chaired by Engr. Shazlan Rahman; the speaker was Dr Venkatesh Raj of Aker Solutions.

Dr Venkatesh started by explaining the advantages of FPSO vessels over traditional fixed offshore platforms. For instance, a FPSO vessel is highly mobile and can be easily re-deployed to other areas with minimum modifications. This gives a FPSO vessel greater cost advantage in developing marginal fields. In addition, by using a FPSO vessel, there is no need to install new pipelines to transfer crude oil to onshore.

Then he went on to discuss the three building blocks of a FPSO vessel: Topside, hull and mooring system. He explained the functions of each component and how to design each of them. Throughout the talk, Dr Venkatesh made several sketches and pulled out some anecdotes from his previous design experiences.

The talk enabled members' accessibility to some of the more technically complex designs. It was followed by a question-and-answer session. An obviously appreciative audience fielded many questions as they eagerly wanted to learn more.

As a token of appreciation, Capt. Ir. Rani, the Chairman of the IEM's MNATD presented a certificate and the book, Engineering Heritage Of Malaysia, to Dr Venkatesh. ■