

Report on Technical Talk on Subsea Processing and Subsea Factory Vision

OIL, GAS AND MINING TECHNICAL DIVISION



by Ir. Ahmad Rafidi Mohayiddin

THE Oil, Gas and Mining Technical Division (OGMTD) organised a technical talk by Engr. Rudisham Marjohan on the subject of 'Subsea Processing and The Subsea Factory Vision' on Saturday, 24 August, 2013. A total of 63 IEM members attended the talk at Wisma IEM, Petaling Jaya.



Figure 1: Engr. Rudisham delivering his talk

The objective of the talk was to provide an overview of the subsea processing and production technologies available today as well the advances being made to realise the vision of a 'subsea factory' to harness hydrocarbon reservoirs. Engr. Rudisham works with One Subsea, a collaboration company between Cameron and Schlumberger. He was also a past committee member of OGMTD from 2009 to 2012 and has extensive experience spanning almost 18 years, in mining and the oil and gas industry.

The vision of a 'subsea factory' is essentially to bring all the conventional hydrocarbon processing and production facilities and infrastructure that we are familiar with down to the seabed, with only umbilicals to transfer the product to shore or to a floating storage tanker above the water. Its main target is to be able to produce hydrocarbons from wells located underwater without the need to connect the wells with a riser to a host facility.



Figure 2: The audience listening attentively to the speaker



Figure 3: Presentation of token to Engr. Rudisham by Ir. Al Khairi

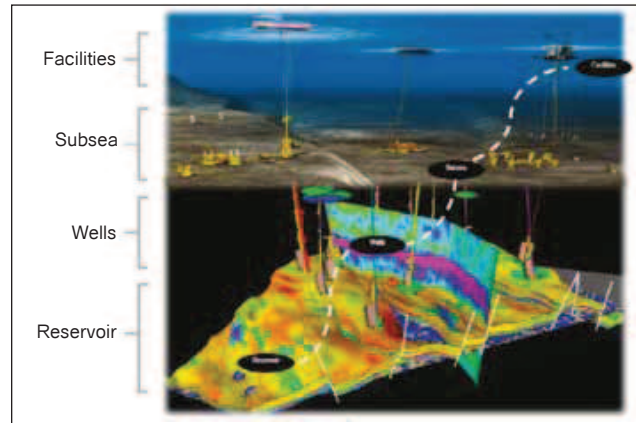


Figure 4: The Subsea System Concept

Engr. Rudisham's talk centered on the definition of the components in a subsea oil and gas development, the reason for having such infrastructure and the equipment and the tools involved in a subsea facility. In addition to the subsea development concept, he also shared with the audience some details about the typical separation and processing equipment that were already available or were being developed to suit the underwater environment such as Subsea Trees, Subsea Power System, Subsea Controls System and Subsea Processing Equipment.

He further described the technological advances in Subsea Processing Equipment which included Seabed Compression System, Seabed Pumping System and Seabed Separation System and explained the application of such systems in developments that were mostly in the North Sea area.

According to Engr. Rudisham, Norwegian oil company Statoil was the first to coin the term 'Subsea Factory' in 2012. The company is at the forefront of development of this vision and hopes to achieve it by 2020. If the vision is achieved, all hydrocarbon extracting facilities that are now above the sea level will be brought down to the seabed, leaving an unintruded view of the empty ocean. ■

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