

WEBINAR TALK ON APPLICATION OF CHEMICAL ENGINEERING PRINCIPLES IN OFFSHORE OIL & GAS PRODUCTION



BEM Approved CPD Hours : 2
Ref No. : IEM26/HQ/177/T(w)

SYNOPSIS

Offshore oil and gas production systems are fundamentally driven by chemical engineering principles, where fluid behaviour, phase separation, thermodynamics, and mass transfer play critical roles in transforming reservoir fluids into export-quality hydrocarbons. Understanding these principles within real operating facilities is essential for engineers across multiple disciplines.

This webinar provides an overview of offshore oil and gas production systems from a chemical engineering perspective, covering the full journey from reservoir to export. Key topics include well fluids behaviour, separation processes, crude stabilisation, gas compression and dehydration, as well as produced water treatment. Emphasis will be given on how core chemical engineering concepts are applied in actual offshore facilities such as Wellhead Platforms, Central Processing Platforms, and Floating Production Storage and Offloading (FPSO) units.

Common offshore challenges such as sand, slugging, hydrate formation, wax deposition, and corrosion will also be discussed from a process and chemical engineering standpoint.

A practical and holistic approach will be presented to bridge the gap between theoretical chemical engineering fundamentals and real-world offshore applications. This will enable participants to better appreciate how engineering principles are translated into design, operation, and optimisation of offshore production systems.

This talk is suitable for engineers, technical professionals, and students particularly those from chemical and process engineering backgrounds; who are interested in gaining a structured and practical understanding of offshore oil and gas production systems.



**Ir. Ridhuan Affandi
Abu Bakar**

Ir. Ridhuan Bakar is a Professional Engineer with 19 years of experience in technical and process engineering within the oil and gas industry. His expertise includes facilities construction, design, operations and maintenance, and asset integrity management for both offshore and onshore facilities. He has contributed to a wide range of assets such as WHP, FPU, MOPU, CPP, PdQ, FPSO, crude oil terminals, and LNG regasification plants. His involvement spans all project phases, from feasibility and conceptual studies to FEED, detailed design, EPC, and brownfield modifications. With experience in consultancies and operating companies, he brings a comprehensive and integrated perspective.



**Moderator:
Ir. Anwar Ahmad
Chairman, CETD**



25th June 2025, Thursday

3.00pm - 5.00pm



ZOOM WEBINAR

