

WEBINAR

Talk on Process and Flow Assurance Analysis for HTHP Pipeline Design Optimization

CPD Hours : 2 CPD Ref No : IEM21/HQ/375/T(w)

Oil, Gas and Mining Technical Division

SYNOPSIS

Fully rated design approach is often opted when the well pressure is below 1500# since the pipeline cost is perceived cheaper during early design stage due to inadequate design detailing. Hence, initially a 16-inch carbon steel pipeline was designed based on a constant maximum Closed-in Tubing Head Pressure (CITHP) of 219 barg with 90oC design temperature based on flowing tubing head temperature (FTHT) added with ~10oC safety margin. To make matter worst, the minimum design temperature was specified as -41oC. This approach would lead to unnecessary project cost especially when, the maximum CITHP for the field will only happen during the first year of production. The CITHP would subsequently depleting to 58 barg as it approaches the end of 15-years production life while the FTHT of 78oC that lead to 90oC design temperature will only be seen by the topside header during a fail case scenario of downstream shutdown valve block discharge.

This presentation will relate a cost reduction exercise by performing a detailed flow assurance analysis to optimize the design parameters to avoid the requirement of buckle triggers to mitigate lateral buckling and the excessive linepipe testing requirement for minimum temperature that could not be guaranteed by the manufacturer.

Saturday | 25 September 2021 | 9AM – 11AM

Registration Fee:

Student Member: Free | IEM Member: RM15 | Non-Member: RM70

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SPEAKERS

Ir. Hayati Hussien has 30 years of offshore and onshore pipeline engineering. She has been involved in international projects including Malaysia, Brunei, Qatar, North Sea, Africa, USA, Australia, Singapore, Thailand and Vietnam. She has been with Petronas since 2013. She is currently taking the role as Principal Offshore Pipeline Engineer with GTS Pipeline Engineering focusing mostly on project related engineering and some repair related design work. Previously she had been a Principal Pipeline Engineer with other major pipeline operator and lead pipeline engineer as well as project manager with oil and gas consultant company. She has vast knowledge in offshore pipeline design, installation, pre-commissioning and commissioning, integrity management and pipeline repair-rehab.

Hamimah Abedul Talik is a Senior Pipeline Engineer from PETRONAS Group Technical Solutions. She has 14 years of experience in pipeline development for subsea pipeline, shore approach and onshore pipeline, involving development plan, contracting activities, pre-development activities, design engineering, procurement and installation as well as post-installation activities i.e. acquiring regulatory approval for operation and technical support to the operation team.

Syahida Husna Bt Azman has 14 years of experience in Upstream Oil and Gas industry including five (5) years operational experience at PETRONAS Carigali and nine (9) years of process design and engineering at Project Delivery & Technology. She is currently taking the role as Staff Process Engineer with Group Technical Solution (GTS) Upstream & Flow Assurance focusing mostly on project related engineering. She has vast knowledge in process engineering, commissioning, troubleshooting and optimization and involved in numerous projects (offshore and onshore). She possesses advanced skills in Flow Assurance especially in fluid characterization, perform steady state and transient pipeline simulation for single & multiphase flow to address liquid management, hydrate, wax, sand, pipeline lateral buckling and other flow assurance issues.

M Aiman Afif M Wazir is a Process Engineer from PETRONAS Group Technical Solutions. He has 6 years of experience in designing and optimizing the upstream facilities which include performing various engineering design studies (Conceptual, FEED, Detailed Design), providing technical support to processing facilities in asset and ensuring the technical integrity of each equipment & processing system are within the design codes and standard.

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