CHANDAN KUMAR

Summary

Years of Experience
12

Office of Employment
Chennai, India

Industries
- Oil and Gas
- Upstream
- Offshore

Types of Facilities
- Production Facilities
- Onshore/Offshore Pipelines
- Upstream Systems
- FPSO

Areas of Expertise
- Flow Assurance
- Subsea Operation
- Production at FPSO
- Front End Engineering Design

Professional Summary

Chandan has 12 years of experience as a Flow Assurance, subsea operation & Production Engineer at FPSO. He has wide experience in late-life field operation and commissioning of 2 deep-water fields. He is currently working as a flow assurance consultant and responsible for the execution of multiphase flow studies. He has been involved in projects related to liquid management, line sizing, hydraulic and thermal analysis, corrosion and erosion assessment, hydrate risk management, hydrate mitigation studies. He is well versed in fluid characterization. He is involved in performing steady state and transient simulations of multiphase production systems such as normal operation, turndown, ramp-up, shutdown, restart, start-up, depressurization and pressure surge scenario.

Qualifications

Education

B. Tech in Petroleum Engineering, Indian School of Mines (IIT), Dhanbad

Software / Skills
- OLGA
- PIPESIM
- SPS
- HYSIS
- Multiflash, PVTSIM
- Kongsberg PSS
- Schneider OTS, DYNSIM

Languages
- English
- Hindi

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Experience

Flow Assurance Consultant II – Wood Group

MANIFA Water Injection Network Pre-FEED, Saudi Aramco, Saudi Arabia

As a Flow Assurance consultant , responsible for performing the thermal & hydraulic analysis in steady state and transient operation for the preliminary Water Injection pipelines network of Manifa field. Optimize pipeline sizes to meet the injection pressure at respective WHP, velocity criteria. Evaluate impact of different cases/scenarios for new network of flowlines, trunk lines for optimum size and velocity.

Tatweer Gas Field Development-FEED, Tatweer Petroleum, Bahrain

As a Flow Assurance consultant, responsible for performing the thermal & hydraulic analysis in steady state and transient operation for gas field development of Awali field. Check the adequacy of slug catcher and recommend on ramp-up rate to meet the limitation of receiving facility.

Lead Well Engineer – Reliance Industries Limited   2020-21
(R & S-cluster Field, MJ field)

- Performed various FA simulations in OLGA to aid in S-cluster field Start-up and early operation. Actively involved in pre-commissioning (including pigging) and start up activity of S-cluster field.
- Provided solution to key issues in early phase of R & S-cluster field operation like MEG optimization, choke anomaly, virtual metering etc.
- Prepared Start-up and operation procedure for S-cluster start-up and action plan in case of any operational upset.
- Actively Involved in Pre-commissioning and start-up of upcoming MJ (Gas condensate) field by performing various FA simulations and developing start-up procedures.

Senior Flow Assurance Engineer – Reliance Industries Limited   2018-20
(D1D3, R & S-cluster Field, MJ field)

- Reviewed flow assurance studies for steady state and transient operations of new R-cluster and S-cluster field.
- Entire R & S-cluster field is modeled in OLGA for reviewing FEED document and aid in new field start-up.
- Entire MEG network of R and S-cluster field modeled in PIPESIM for MEG deliverability / hydraulics study.
- Reviewed and optimized MEG requirement FEED document throughout the life of R and S-cluster field

- Done Fluid characterization, generate tab file, phase envelop and Hydrate curves for all fields in thermodynamic simulator (PVTsim, Multiflash)
- Perform various sensitivity studies in OLGA and #what if# scenarios in these fields to provide inputs for planning operational strategies. It includes MEG tracking, slug tracking, Tracer tracking, EVR estimation, hydrate check, line pack, depressurization / blowdown, CDT, warm-up period, surge analysis, insulation requirement etc.
- Developed subsea field Operating Procedures with regard to start-up, shutdown, steady state operations and operational upset scenario.
- Involved in pigging operation executed in subsea pipeline. Perform few FA simulation to aid it.
- Coordinating with project team for supervision of contractor & reviewing the projects documents (FEED) at various stage of new field development.
- Company representative for
  - ➢ FAT & SAT of OTS, SAT of PSS of R-cluster field.
  - ➢ MAT, FAT & SAT of OTS for S-cluster field.
  - ➢ FAT of DCS for MJ field.
- Reviewed all documents pertaining to OTS and PSS of R-cluster, S-cluster and MJ field.
- Training imparted to subsea panel engineers about subsea operation of R-cluster field through OTS (Trainee Simulator).
- Actively involved from concept phase to implementation of "Autonomous field (Digital Twin)" project of new fields.
- Basic knowledge of "Wax management" of upcoming (MJ) gas condensate field.
- Prepared action plan for D1D3 field final shutdown and its flow line preservation. Various FA simulations are done to aid it.

Flow Assurance & Production Engineer – Reliance Industries Limited   2015-18

(D1D3, R & S-cluster Field, MJ field)

- As Production Engineer, responsible for production optimization in late life of field operation. Executed commingled flow of multiple wells in single / double risers to FPSO.
- Erosion analysis in riser and swivel during any operational change.
- Hydrate management particularly during FPSO shutdown.
- Commissioned the work over wells
- Prepared and reviewed SOPs for safe & smooth subsea operation of MA field
- Developed and executed operational strategy for safe shutdown and start-up of MA field during FPSO annual maintenance.

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Flow Assurance & Subsea Operation Engineer – RIL   **2013-15**

   (D1D3, R & S-cluster Field, MJ field)

- Flow Assurance support to Subsea Panel Operation of D1D3 field. It includes MEG optimization, VLP curve, minimum back Pr at well etc.
- Prepared operational strategy for reliable operation of D1D3 field.
- Handled Liquid loading / slugging issue efficiently.
- Prolonging the life of the deep water field by gas re-injection, surfactant injection, and OT Pr reduction. Various FA simulations done in OLGA to aid it.
- Successfully implemented MEG free operation in D1D3 field after undergoing extensive simulation and feasibility study.
- Successfully implemented the surfactant application (innovative approach) in D1D3 field for prolonging the life of wells.
- Support subsea asset integrity assessment through corrosion inhibitor / biocide requirement.

Subsea Panel Engineer – Reliance Industries Limited   **2011-13**

   (D1D3 field)

- Subsea Panel operations for D1D3 Deepwater gas field
- Efficiently handled during operation upset like unplanned field shutdown or Onshore Terminal trip
- MEG Injection analysis with changing operating envelope of the field
- Efficiently handle sand producing well.
- Operational support for subsea well intervention job

Process Field Engineer - Reliance Industries Limited   **2010-11**

   (Onshore Terminal)

- Worked as a GET in Onshore Process Plant
- Worked in Gas Dehydration and MEG regeneration Plant

Professional History

- Wood (2022 – Present)
- Reliance Industries Limited (2010 – 2021)