

# PARTHA PRATIM CHAUDHURY

## Freelance Consultant – Oil and Gas Upstream Surface Facilities

**Address:** D 203, Sunny Fort, Action Area IIB, New Town, North 24 Parganas, West Bengal (700161) India

### PROFESSIONAL SUMMARY

- A result oriented Chemical Engineer with 35 years' record of strategic planning, consulting, improving efficiency of operations, team building in Oil and Gas Upstream Process Operations.
- Leader of Engineering group to achieve Process optimization and Operation efficiency in Northern Area Oil Operation of Saudi Aramco.
- Leader of Multidisciplinary team to develop Asset Optimization strategies by using predictive analytical tools.
- Developed and implemented asset strategy with Asset Manager to minimize total cost of ownerships of all Assets.
- Developed Best Practices, Integrity and Assessment Systems and root cause analysis processes at corporate and site levels in Saudi Aramco for their Oil and Gas installations having Production Capacity of 1.2 MM BOPD of Arab Heavy and 1 MM BOPD of Arab Medium.
- Managing a team of 10 engineers, responsible for high quality engineering outputs, maintaining integrity of engineering documentation by ensuring that all relevant company standards are followed.
- Mentored 30 young engineers to provide engineering inputs for planning and execution of Process Plants T&Is, supports other engineering section project engineers in implementation of their projects.
- Extensive leadership experience in implementing IT based systems on a pan company basis at ONGC, a Fortune Global 500 company and the largest oil and Gas Company in Asia including the largest PRA implementation in the Asia Pacific.
- Presented a technical paper titled "Five-Step Asset Integrity Assessment Process – An initiative towards achieving Operational Excellence" in ADIPEC 2018.
- Presented a technical paper titled "Utilization of Formation Water as Injection Water – A Step toward Environmental Protection and Energy Saving" in PETROTECH 2014.
- Presented a technical Paper titled "Achieving Operational Excellence through Asset Performance Management" in 2013 Asset Integrity Management Technical Exchange Forum at Saudi Aramco.
- Presented a technical paper on "Implementation of Production Planning in an E&P Company Integrated Approach from Well Head to Refinery Gate" at PETROTECH 2005.

### PROFESSIONAL EXPERIENCE

#### SP Bumi Armada (April 2022 – October 2022)

**Designation:** Installation Manager

**Responsibilities:**

- Leading a team of professional engineers to carry out operation and maintenance of Rajeswari Gas Terminal at Rajasthan.
- Interface Management with Client to manage the facility in a safe, cost efficient and timely manner.

#### Saudi Aramco, Saudi Arabia (May 2011- August 2021)

**Designation:** Lead Process Engineer with additional responsibility of Asset Integrity

**Responsibilities:**

- Lead Manager for building up a standard frame work for Asset Reliability & Integrity Assessment, Termed DIPA (Design Integrity and Plant Assessment) in all facilities by introducing Critical systems, their assessment criterions and performance Standards for each system. This indigenously developed standard system saved 0.5 to 1 M USD for the company by avoiding hiring of outside contractors for the assessment to achieve operational excellence.
- Leading a multidisciplinary team of 20 engineers to assess the Asset Health, Integrity and Reliability at offshore and Onshore oil and gas facilities in Northern Area Oil Operation of Saudi Aramco to sustain the maximum production till 2030.
- Lead Manager to conduct Reliability, Availability and Maintainability study for the Assets with the help of asset performance monitoring data to generate models to explore different operating scenario to operate assets with lower overhead and optimized output.
- Supervised to provide input in preparing the maintenance budget and controls spending through appropriate tracking forecasting and adjustment.
- Engineering guidance to Operations and Maintenance Departments in maximizing asset utilization, troubleshooting the problems related to operating assets by implementing the low hanging fruits recommended by the studies.

- Engineering Support to implement long term solution to develop, Manage and Implement capital expenditure projects.
- Leading a team of engineers to develop Water Master Plan for optimizing water utilization in addition to reusing the produced water for reservoir pressure maintenance as a part of Ground Water Conservation as per Kingdom Water conservation policy. This scheme has potential saving of 15.6 MMUSD per year for the company in addition to the savings of ground water.
- Leading a team of process engineer to compressed air balance study of the Gas oil separation plant as an energy saving initiative to the extent of 3.6 MMUSD per year.
- Conceptual study related to economic extraction of higher value hydrocarbons from the Fuel gas to restrict unnecessary burning of components.
- Preparation of DBSP for the development opportunity in the GOSP to handle the Field Development on long term perspective.
- Leading a team of Process specialist to provide support for development of PFD and P&ID for process up-gradation and modifications in World's Largest GOSP with processing capacity of 1.2 MBOD.
- Leading a multidisciplinary team to investigate process upset by Taproot methodology to find and fix root causes and develop corrective actions that improve safety, production, maintenance, and quality.
- Documenting engineering and quality processes, instructions and templates.
- Engineering study for optimized facility utilization and modifications in process parameters.
- Conceptual study for implementation of latest technology to operate the process in optimized mode by Challenging the organization with best practices
- Conducting process simulation with HYSYS for process design and engineering
- Leading Management of Change review teams and HAZOP studies to ensure safe working and operating conditions in the plant.
- Checks progress and give guidance to application of In-Line Separation Technology for Capacity Enhancement and Quality Adherence in Process facilities.

#### **Oil & Natural Gas Corporation Limited, India (July 1988 – April 2011)**

**Designation:** Chief Engineer/Superintending Engineer (2002 to April 2011)

##### **Responsibilities:**

- Responsible for all process design activities/ deliverables of upstream oil and gas projects of both green fields and brown fields during DBSP (Design Basis Scoping Paper) as well as bids.
- ONGC wide implementation of ERP systems like SAP Oil and gas production and accounting (PRA) and SAP/R3 4.6 C upgraded to SAP ECC 6.
- Simulation study for optimizing the value-added product from Gas Processing Complex.
- Conceptual study for extracting hydrocarbons from the Naphtha feed to increase revenue generation of the Plant.
- Prepare cause-and-effect charts, Heat and Mass balance calculations and start-up and shutdown logic.
- Review of Contractor Technical package including Flow lines, Crude/Gas separation, Crude stabilization, Gas conditioning during modifications and upgrade.
- Generating a Standardized reporting structure by calculating the production allocation to each well for regulatory reporting and Asset accounting.
- Framing up a companywide standard Daily Progress report for each installation and generation of Corporate MIS reporting.
- Defining and monitoring business unit Key Performance Indicators for Balance Score Card.
- Monitoring of performance of static equipment, planning of repair/maintenance /replacement based on condition in the ageing process plant.
- Managing Planning and Monitoring of product evacuation of the Hazira, Uran and Ankleswar Plant.

**Designation:** Superintending Engineer/Dy. Superintending Engineer/Executive Engineer, Gas Processing Complex, Hazira (1998-2001)

##### **Responsibilities:**

- Leading a team to evaluate and Flare Reduction program and Flare gas recovery to achieve Zero flaring.
- Simulation study to find out the root cause for hydrate formation in the fuel Gas system.
- Conducted Process risk and Hazard Analysis for Product storage and dispatch system.
- Provided technical support to operations and project management groups and liaised with statutory authorities including periodic reporting.
- Looked after resource planning and optimization of LPG and NGL production and conducted studies for recovery of spent TEG from overhead vapours of the glycol regeneration column.
- Coordinated effectively with downstream industries for smooth dispatch of products like LPG, NGL, ARN and SKO.

**Designation:** Executive Engineer, Process, Gas Processing Facility, Hazira (1994 to 1997)

**Responsibilities:**

- Looked after the operation of continuous process plants – 5, 70, 000 MTPA LPG unit, condensate fractionation unit (CFU) with the capacity for handling 12,000 cu m per day of sour condensate and gas sweetening/dehydration units (GSU/GDU) with 2 trains of 5 MMSCMD capacity – equipped with DIDC process control systems like Centum, Bentley and Honeywell TDC 3000.
- Managed the pre-commissioning commissioning and start up activities of Gas Sweetening Units, Gas Dehydration Units, Condensate Fractionation Units, Dew Point Depression Units and related utilities like Cooling Tower, Air Compressor and Inert gas Plant in Phase III and IIIA expansion projects of Hazira Gas Processing Complex.
- Commissioned the kerosene recovery unit and planned and executed modifications for increasing capacity.

**Designation:** Executive Engineer/Assistant Executive Engineer, Process, Bombay High Mumbai (1988 - 1993)

**Responsibilities:**

- Was the shift in charge of the In-fill complex at the Bombay High oil field producing 40000 BOPD of crude oil and 4.3 MMSCMD of compressed gas and involving pumping in of 6000 cu. m of treated water for maintaining reservoir pressure.
- Looked after maintaining the database of production and well data, product optimization, maintenance planning and testing of wells, and modification of facilities.
- Monitored operations and coordinated with other disciplines to ensure total safety of production operations and utilities.
- Coordinated well head jobs like acid jobs and well completions.
- Commissioned ICP, ICW and ICG platforms at Bombay High with oil processing and water injection facilities and ICG platform with Process Gas Compressors and Gas Dehydration units with a capacity 2.3 MMSCMD.

**DCIPS, Kolkata** (July 1987 – June 1988)

**Designation:** Process Engineer

**Responsibilities:**

- Participated in the pre-commissioning activities at IFFCO, Aonla and Indo Gulf Fertilizers Jagadishpur. Looked after chemical cleaning of process pipelines, boilers, de-aerators and boiler feed lines, negotiations and finalization of technical documents and follow up for completion of the jobs.

## INTERNATIONAL ASSIGNMENTS

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- **Functionality testing for new functionalities in myERP 2005**, SAP AG, Waldorf Germany, 14 days.
- Commissioning Engineer Process for the **first ethylene plant in Egypt with 6 SRT type ABB Lummus make 3 MMTPA capacity** at Alexandria, Egypt, Mar-Jun 2000.
- Commissioning Engineer, Process for **enhancement of capacity of the LPG plant to 1987 cu. m per day using cryogenic technology and high-pressure oil separation unit with the capacity of handling 45,000 BOPD** at Petrobas, Urucu Brazil, Oct-Nov 1999.

## PROFESSIONAL DEVELOPMENT

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- **PHA/HAZOP Leadership Courses by Ecomon**, The Middle East Economic & Managerial Development in the year 2012.
- **Hysys Process Simulation** at Saudi Aramco in the year 2013.
- **SAP Modules** – MDM in ECC 6.0 (2008), IS-OIL PRA in ECC 6.0 (2008), SAP IS-OIL Downstream module (2003), SAP PP-PI (2002), SAP Bangalore.
- **Contract Management and Arbitration Proceedings**, IIMC, Kolkata, 2006.
- **Project Management**, IIMC, Kolkata, 2002
- **Project Management**, ASCI, Hyderabad, 1998
- **Basic Environment Management**, IPSHEM, Goa, 1995
- **Offshore Safety and Survival**, SEWRI, Mumbai, 1992

## EDUCATION

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- **B. Tech. Chemical Engineering**, Calcutta University, 1987
- **B. Sc. Chemistry**, Calcutta University, 1983