KP
(SENIOR CONSULTANT)

Introduction & Background

- A seasoned Chemical Engineer with over 17 years of extensive experience in process design, engineering, and troubleshooting across multiple sectors, including refineries, fertilizers, gas treatment processes, renewable energy, and chemicals.
- He has a proven track record of working in the technology departments of multinational EPC companies within the oil and gas sector, providing innovative solutions and technical expertise to optimize performance and enhance operational efficiency.
- Highly specialized chemical engineer with significant expertise in refinery processes, including Diesel Hydrotreating, Fluid Catalytic Cracking (FCC), and Hydrocracking.

Functional Tool Expertise:

- **Process Simulation Software**: Aspen Plus, Aspen HYSYS, Aspen Energy Analyzer, Aspen Batch, PROMAX, PROTREAT, REFORM3PC
- **Modeling Software:** MATLAB, FORTRAN

Experience summary
Sr. Principal Solution Consultant

- Possesses extensive expertise in dynamic simulation within the field of chemical engineering, specializing in the modeling, simulation, and optimization of complex chemical processes.
- Utilized advanced simulation tools like Aspen HYSYS, Aspen Plus, and MATLAB to design and optimize a variety of chemical and refinery processes.

Larsen & Toubro (L&T) (Deputy General Manager)

- Specialized in process simulation, scale-up, steam and cooling water balances, heat and material balances (H&MBs), equipment sizing, and vendor document evaluation.
- Executed engineering and design works within budget and schedule while ensuring quality and safety standards.
- Reviewed scopes of work, verified licensor documents, and evaluated performance guarantee parameters.

Project Experience:

1. **Green Hydrogen Project:** Developed a digital solution for green hydrogen production, focusing on end-customer and EPC provider requirements.
2. **Diesel Hydrotreating (HPCL):** Simulated and optimized a Diesel Hydrotreater process, conducted pinch analysis, and designed key components for the unit.
3. **FCC Demo Unit (HPCL):** Modeled and simulated the process, developed PFDs and P&IDs, and participated in HAZOP for the FCC demo unit.
4. **Slurry Hydrocracker (IOCL R&D Centre):** Conducted process simulation and designed critical equipment for a slurry hydrocracker demo plant.
5. **Isomerization Unit (SAPOC, Yemen):** Carried out a conceptual engineering study, including feed analysis, isomerization reaction modeling, and process design.

KP
(SENIOR CONSULTANT)

Technical Expertise:

- **Process Simulation and Modeling:** Proficient in using advanced software tools like Aspen HYSYS, Aspen Plus, Aspen Energy Analyzer, and MATLAB for dynamic and steady-state simulations. He has successfully modeled complex chemical processes, enabling accurate predictions of system behavior and performance under various operating conditions.
- **Process Design and Optimization**: Expertise in generating heat and material balances (H&MBs), sizing equipment, and optimizing process flows for efficiency and cost-effectiveness. He has contributed to the design and scale-up of critical refinery units, ensuring optimal operation and energy use.
- **Project Execution**: Coordinated interdisciplinary engineering activities, ensuring compliance with project schedules and budgets.
- **Dynamic Simulation:** Specializes in dynamic modeling to analyze transient states and operational scenarios, ensuring the stability and reliability of chemical processes.

Professional Certifications:

- **Internal Auditor Training (ISO 9001), 2012**
- **Engineering Management Excellence, L&T Institute of Project Management, 2017**
- **CEP Courses:** Reactive Distillation, Modeling, Analysis and Optimization of Industrial Processes, and Pinch Technology from IIT Bombay

Education:
1. Ph.D. (Tech.) in Chemical Engineering, Institute of Chemical Technology, University of Mumbai
2. M. Chem. in Chemical Engineering, Institute of Chemical Technology, University of Mumbai
3. B.E. in Chemical Engineering, S.S. Jondhale College of Engineering, Mumbai University