Maziar Bahiraee

Chemical Process and Commissioning Engineer



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Skills

Process Engineering

Commissioning and Start Up

Simulation Softwares

About Me

Experienced **Chemical Process Engineer** with over **13 years of expertise** in **process engineering, commissioning, and start-up** for **ABS and rubber production plants** in the petrochemical industry. Proficient in evaluating and refining **process designs** provided by **licensors, basic engineering consultants, and EPC contractors**, ensuring compliance with **engineering codes and project specifications**. Extensive practical experience in **start-up, commissioning, and operational phases**, translating design concepts into fully functional industrial systems. Adept in **process simulation and modeling (Aspen Plus, HTRI)** to validate engineering designs, troubleshoot inefficiencies, and optimize plant performance. In-depth knowledge of **OPERCOM methodology, process safety protocols, and plant optimization strategies**, allowing for seamless transitions from design to operation while mitigating risks and improving efficiency.

Career Summary

- **Process Engineering Department Lead** – Led teams in overseeing **design review and validation** of new petrochemical projects, ensuring seamless integration of engineering principles into operational realities.
- **Commissioning & Start-Up Manager** – Directed **pre-commissioning, commissioning, and start-up** of ABS/Rubber production facilities, applying **OPERCOM methodology** to ensure **systematic project execution**.
- **Process Engineer & Production Control Lead** – Specialized in **process monitoring, troubleshooting, and efficiency improvements**, utilizing both theoretical knowledge and hands-on operational insights.
- **Project Engineering Consultant** – Provided strategic technical guidance to **major petrochemical projects**, managing engineering reviews, contractual compliance, and claim resolution with EPC contractors.

Key Skills

✓ Process Design Review & Validation
✓ Commissioning & Start-Up (OPERCOM)
✓ Simulation & Process Modeling (Aspen Plus, HTRI, Honeywell)
✓ P&ID, PFD, and H&MB Analysis
✓ Process Safety & HAZOP Studies
✓ Energy & Utility Optimization
✓ Process Control & Operations Management
✓ EPCC Contractor Coordination & Claims Resolution
✓ Multi-disciplinary Engineering Review
✓ Technical Report Writing & Presentation

Team Leadership

Decision-making

Time Management

Contract Management

Safety Procedures

Vendor Management

Stakeholder Management

Problem-Solving Abilities

Multitasking

Positive Attitude

Team building

Excellent communication

Task prioritization

Languages

French A2

Elementary

English B2

Upper intermediate

General Software

Process Simulation

Good

Experience Highlights

PADJAM Polymer Development Co. | Director of Production and Operations (2025,07 – Present)

- Responsible for integrated management of ABS/Rubber plant operations including Production, Technical Services, Maintenance, Warehousing and HSE. Key duties: ensuring production targets, process optimization, MOC implementation, HSE compliance (PTW/HAZOP), new product development, cost reduction. Achieved zero lost-time incidents and 15% efficiency improvement.

SPG-Steiner GmbH | Commissioning & Start-Up Supervisor (2024,11 – 2024,12, and 2025,06 – 2025,07)

- Supervised **commissioning and start-up** for the **Kuzey Marmara Gas Storage Expansion Project**, ensuring **DCS logic validation, BMS software review, and system conformity checks**. Led **adsorber bed vessel filling, packing installation, and pre-commissioning activities** for the **Silica Gel Unit**. Developed **commissioning and start-up procedures**, including **DFGH dry-out steps**, ensuring seamless project execution.

PADJAM Polymer Development Co. | Commissioning & Start-Up Manager (2021 – 2025)

- Supervised **pre-commissioning, commissioning, and start-up activities**, ensuring systematic execution in line with **TOTAL OPERCOM methodology**.
- Reviewed commissioning procedures, system readiness, and **Pre-Startup Safety Reviews (PSSR)**.
- Managed **tendering & contractor selection** for commissioning and start-up scope.
- Monitored and controlled **functional tests, system integration, and operational testing**.

PADJAM Polymer Development Co. | Process Engineering Dept. Lead (2017 – 2021)

- Managed a team of **five process engineers**, overseeing **800+ engineering documents (PFDs, P&IDs, H&MBs, data sheets, C&E diagrams)** from licensors and EPC contractors.
- Led **process simulations and validations** using **Aspen Plus & HTRI** to cross-check consultant-provided designs.
- Participated in **HAZOP studies and close-out implementation** to enhance process safety and mitigate operational risks.
- Played a key role in **contractor claims management**, successfully resolving **$55M worth of claims**.
- Proposed **design modifications enabling HIPS & GPPS production** within ABS plants.

Takht-E Jamshid Petrochemical Co. | *Process Engineering Dept. Head (2016 – 2017)*

- Led **seven process engineers** across **process engineering, process control, and production planning**.

MS Office Package

Good

Autocad

Average

Photoshop

Good

- Implemented **15+ major process modifications**, improving plant throughput by **5%**.
- Supervised **TSR workflows**, coordinating with **mechanical, electrical, and instrumentation teams**.
- Led **utility and energy efficiency initiatives**, reducing operational costs and optimizing consumption.

Takht-E Jamshid Petrochemical Co. | *Junior Commissioning Engineer (2013 – 2014)*

- Completed **7 months of intensive training** in **synthetic rubber plant operations**.
- Conducted **pre-commissioning, commissioning, and start-up** tasks in compliance with **OPERCOM methodology**.
- Managed **PSSR reviews**, ensuring system readiness for start-up.

Certificates and Courses

PMBOK 6th Edition Training (2019) – Comprehensive training in **project management methodologies**, cost control, and risk assessment.

1. **Process Engineer Expert Training (2017)** – Advanced course covering **process simulation, troubleshooting, and engineering design reviews**.
2. **Rubber Processing & Compounding Technology (2016)** – Specialized training in **polymerization techniques, elastomer properties, and quality control**.
3. **OHSAS 18001: Auditor Training (2016)** – Certified in **occupational health & safety management systems**.
4. **Honeywell Experion PKS 50 Training (2015)** – Hands-on training in **process control systems, logic programming, and automation**.
5. **Dynamic Simulation & Modeling of Polymerization Reactors (2016)** – In-depth study on **reactor modeling and optimization**.
6. **ISO 9001:2015 Auditor Training (2016)** – Expertise in **quality management and compliance auditing**.
7. **Hazard & Operability Study (HAZOP) (2016)** – Advanced knowledge of **risk identification and process safety analysis**.
8. **AspenONE Process Simulation (2012)** – Skilled in **thermodynamic modeling, equipment sizing, and process optimization**.
9. **Corrosion Mechanisms in Boiler & Heat Exchanger Systems (2016)** – Training on **materials integrity and anti-corrosion strategies**.

Technical Competencies

- **Process Simulation & Modeling:** Aspen Plus, HTRI, Honeywell Experion PKS 50
- **Engineering Document Review:** PFDs, P&IDs, H&MBs, C&E, Process Specifications
- **Software Proficiency:** AutoCAD, ICAPS, MATLAB
- **Standards & Methodologies:** OPERCOM, API, ASME, TOTAL Engineering Guidelines
- **Process Safety & Compliance:** HAZOP, SIL, PSSR, ISO 9001, 14001
- **Commissioning & Start-Up Execution:** ICAPS-based system monitoring