Maziar Bahiraee

Chemical Process and Commissioning Engineer



Contact

Address
Istanbul, 34590

WhatsApp:
+44 7799 849210

E-mail
Maziar.Bahiraee@Gmail.com

Websites, Portfolios, Profiles

Website: Mahizadyar.me

www.linkedin.com/in/Maziar-Bahiraee

Skills

- Process Engineering
- Commissioning and Start Up
- Simulation Softwares

Seasoned chemical process engineer with over 13 years of expertise in the petrochemical industry, specializing in ABS (Acrylonitrile Butadiene Styrene) and rubber production plants and projects. Renowned for leading innovative process engineering initiatives, optimizing polymer production systems, and driving operational excellence. Proficient in managing licensors and negotiating licensing agreements for Process Design Packages (PDPs), ensuring alignment with organizational and industry standards. Experienced in developing advanced process control frameworks, troubleshooting complex systems, and delivering high-quality solutions that improve plant efficiency and product quality.

Extensive experience as a commissioning and start-up engineer, utilizing the OPERCOM methodology to oversee critical project phases from pre-commissioning to start-up. Skilled in implementing system and subsystem readiness reviews, executing conformity checks, and ensuring plant operability through comprehensive Pre-Startup Safety Reviews (PSSR). Managed functional and operational testing across multiple projects, guaranteeing compliance with safety, quality, and environmental standards while adhering to project milestones and budgets. Successfully developed and supervised commissioning task registers, ensuring seamless transitions from construction to operation. Adept at applying PMP principles to streamline project planning and execution, with a strong focus on risk management, cost control, and schedule adherence. Demonstrated ability to manage multi-disciplinary teams and collaborate with stakeholders, fostering a culture of innovation and accountability. Expert in resolving EPCC contractor claims, safeguarding project timelines, and optimizing resource allocation.

In leadership roles, provided strategic oversight and technical guidance to major petrochemical companies, including Padjam Polymer Development Co., Sadaf Petrochemical Company, and Fanavaran Petrochemical Co. Successfully managed high-value projects, implementing continuous improvement strategies and achieving measurable gains in productivity and efficiency.

Fluent in English and basic in French, enabling effective collaboration in multicultural environments. Committed to professional development with certifications in PMBOK 6th Edition, rubber processing, and OHSAS 18001. Passionate about leveraging expertise to solve complex challenges, drive innovation, and contribute to the dynamic field of chemical engineering.

Team Leadership

Decision-making

Time Management

Contract Management

Safety Procedures

Vendor Management

Stakeholder Management

Problem-Solving Abilities

Multitasking

Positive Attitude

Team building

Excellent communication

Workload Prioritization

Languages

French A2

Elementary

English B2

Upper intermediate

Software

Process Simulation

Good

Work History

2025-07-Current

Director of Production and Operations

ABS/Rubber Production Complex | PADJAM

Polymer Development, Assalouyeh Port

Responsibilities:

- **Strategic Leadership:** Direct and oversee all production operations, technical services (engineering, process control, laboratory, and inspection), maintenance, warehousing, and HSE departments. Develop and implement strategic plans for production, and ensure alignment with sales and marketing objectives.
- **Operational Management:** Manage the entire production lifecycle, from planning and goal setting to execution. Lead operational excellence, ensuring high product quality and efficiency. Guide new product development and manage Management of Change (MOC) processes.
- **Safety and Compliance:** Champion a culture of safety, health, and environmental protection. Oversee all related activities, including industrial safety, fire prevention, and waste management. Ensure strict adherence to all regulations and standards.
- **Resource Management:** Optimize resource allocation, including personnel, equipment, and materials. Oversee the management of product and spare parts warehouses.
- **Stakeholder Relations:** Act as the primary point of contact for internal and external stakeholders. Lead the senior on-call team for the complex.

First Stage: 2024-11-2024-12

Second Stage: 2025-06-2025-07

Commissioning & Start-Up Supervisor

SPG-Steiner GmbH, Istanbul, Turkey

Kuzey Marmara Underground Gas Storage Expansion (Phase III) Project | BOTAŞ

- Reviewed DCS logic software with Silica Gel Unit Logic and C&E (SAT).
- Prepare and develop filling procedure and supervised internal installations, packing loading, and top distributor nozzle installation for Adsorber Bed Vessel Inspection in Silica Gel Unit.
- Pre-Commissioning & Functional Tests, Witnessed conformity checks, static tests, and system preservation activities for the Gas Processing Unit.
- Fired Heater BMS logic Software Review with Vendor documents.
- Prepared and develop commissioning and start-up procedures for DFGH dry-out steps.

MS Office Package

Good

Autocad

Average

Photoshop

Good

2023-01 - 2025-07

Commissioning & Start-Up Manager

ABS/Rubber Production Project (200KTPA ABS & 60KTPA Rubber 400 M€) | *PADJAM Polymer Development, Assalouyeh Port*

1. Tender Documents and Contractor Selection:
   - Prepare commissioning and start-up Scope of Work (SOW) and other tender documents, and WBS, contract draft, system and sub-system list and Marked-up documents.
   - Perform bidder qualification process
   - Clarification meeting with bidders, site visit etc.

2. HSE Supervision: Verify adherence to HSE protocols, including Permit to Work (PTW), Lockout/Tagout (LO/TO), and Simultaneous Operations (SIMOPS) (GS-EP-EXP-101).

3. Planning and Interfaces: Review WBS, split of responsibility, review schedules for commissioning phases, ensuring alignment with OPERCOM principles.

4. Pre-Commissioning Phase: Witness critical pre-commissioning tasks, including conformity checks, static tests, and system preservation and prepare punch list.

5. Execution Oversight: Confirm readiness for commissioning through systematic reviews of Pre-commissioning Task Registers (GS-EP-EXP-105).

6. Progress and Reporting:
   - Monitor completion of Preliminary Checks (PRC), Functional Tests (FT), and Operational Tests (OT) using ICAPS tools (GS-EP-EXP-107, GS-EP-EXP-109).
   - Provide daily and weekly reports summarizing milestones and punch list status.

7. System Integration: Supervise dynamic testing, MRT, including the introduction of live process fluids, ensuring Safety & Environment Critical Elements (SECE) readiness.

8. Punch List Management: Categorize and track punch items until system readiness (GS-EP-EXP-101).

9. Documentation Approval: Ensure commissioning dossiers, red-line markups, and test records meet Achievement of Commissioning (AOC) requirements.

10. Start-Up Coordination:

Support initial operation, validating system performance against design specifications.

Approve performance test results and ensure proper handover to operations.

11. Management:

- Managed and motivated employees to be productive and engaged in work.
- Maintained professional, organized, and safe environment for employees and patrons.
- Established team priorities, maintained schedules and monitored performance.
- Evaluated employee performance and conveyed constructive feedback to improve skills.

2017-07 - 2023-01

Process Engineering Dept. Head

ABS/Rubber Production Project | *PADJAM*

Polymer Development, Assalouyeh Port

Role Overview:

As Process Engineering Department Lead at PJPC, managed a team of five process engineers, overseeing process design reviews for the ABS/Rubber production project. Ensured technical alignment between the Licensor (Versalis-Eni), basic engineering consultant (Tecnimont), and EPC contractor by evaluating engineering documents, providing feedback, and implementing process optimizations. Actively participated in HAZOP studies, procurement meetings, and contractor claim management, ensuring project success within scope, schedule, and budget.

- Reviewed more than 800 MDR & VDR Documents (PFDs, P&IDs, H&MBs, data sheets, C&E diagrams, and process specifications), ensuring compliance with licensor standards and operational feasibility.
- Participated in KOMs, PIMs, and 3D Model Reviews with licensors, consultants, and EPC contractors and ensured that process engineering concerns were addressed early.
- Prepared technical reports for senior management and board of directors on process issues, bottlenecks, and potential design optimizations, supported executive decision-making, resulting in cost savings of €3 million through alternative process strategies.
- Acted as the process focal point for liaising with mechanical, electrical, and instrumentation disciplines to ensure cohesive project execution.

- Served as a core member of the contractor claims management team, handling six major claim cases, successfully defending five (worth $55 million) in PJPC's favor.
- Conducted technical feasibility studies on expanding plant capabilities, proposing process modifications to enable HIPS and GPPS production in the ABS plant.
- Managed process control software development, ensuring integration with plant DCS and SIS systems.
- Participated in FAT for critical control systems, validating functionality before site installation.
- Led HAZOP studies, identifying safety and operational risks, and ensuring proper mitigation measures were implemented in close-out report.

2019-12 - 2021-03

Advisor To Chief Executive Officer and Engineering Manager

Rubber Production Project (137KTPA E-SBR) | Assalouyeh Port

Provided strategic advice on engineering challenges and help managing Engineering consultant by reviewing at least 50 major engineering documents.

Supervised EPCC contractors, resolving claims and ensuring project alignment with client objectives.

Over viewing and define the structure of at least 5 technical contracts such as feed stock purchase, design modification.

2019-04 - 2019-12

Advisor To Chief Executive Officer and Engineering Manager

GTM, MTO Plants Projects | Fanavaran Petrochemical Co.

Offered expert guidance in engineering, project planning, and risk management for large-scale petrochemical operations.

Facilitated conflict resolution with contractors, safeguarding project progress and budgets.

2016-02 - 2017-02

Process Engineering Dept. Head

SBR/PBR Production Plants (40KTPA SBR Goodyear® ,15KTPA PBR, BFGoodrich® | TJPC (Takht-E-Jamshid petrochemical company), Bandar-e-Mahshahr County

- **Role Overview:**

As the Process Engineering Department Head at Takht-e Jamshid Petrochemical Company, led seven process

engineers across Process Engineering, Process Control, and Production Planning & Process Control sub-departments. Focused on managing Technical Service Requests (TSRs) for process modifications, optimizing plant performance, and ensuring operational stability. Maintained process control by monitoring key parameters, mitigating fluctuations, and driving efficiency improvements.

Led 15+ major process modifications, resolving bottlenecks and increasing throughput by 5%. Managed TSR workflow, coordinating with electrical, instrumentation, and mechanical teams.

- Designed structured process log sheets for operators and implemented a data-driven decision-making approach. Trained 30+ operators and engineers, ensuring accurate documentation and compliance with process control standards.

- Evaluated and extend 25+ new chemical suppliers, reducing procurement costs by 1% without impacting performance.

- Generated weekly, monthly, and annual reports on plant efficiency, product quality, and waste. Resolved 5 recurring inefficiencies, improving plant reliability.

- Established a systematic approach for predicting product costs by analyzing feedstock, chemicals, utilities, personnel, and logistics. Improved cost allocation accuracy, leading to a 6% reduction in unaccounted and hidden process costs.

- Led capacitor bank tuning, reducing reactive power losses and cutting electricity costs by 2% with an 8-month ROI.

- Completed Process Engineering Training courses such as: Honeywell Experion PKS 50, Introduction of Elastomers, Physical Testing of Rubber, HazOp Study, Corrosion Mechanisms in Boiler & Heat Exchanger, Rubber Processing and Compounding Technology, applying advanced strategies to reduce downtime by 15%.

2014-07 - 2016-02

Production Planning & Process Control Lead

SBR/PBR Production Plants (40KTPA SBR, Goodyear®, 15KTPA PBR, BFGoodrich®|TJPC

(Takht-E-Jamshid petrochemical company), Bandar-e-Mahshahr County

Role Overview:

- As the Production Planning & Process Control Supervisor, focused on optimizing plant efficiency by managing feedstock, chemical usage, production output, and waste material analysis. Led quantitative monitoring and forecasting efforts to ensure accurate inventory control, minimize costs, and enhance overall plant performance.
- Production Efficiency & Performance Analysis – Monitored feedstock intake, chemical consumption, and production output, conducting root cause analysis for process inefficiencies.
- Utility Consumption Monitoring – Tracked daily, weekly, and monthly utility usage, identifying deviations from design parameters and implementing corrective actions.
- Quantitative Reporting & Forecasting – Prepared detailed weekly, monthly, and annual reports on feedstock inventory, chemical usage, product output, and sales.
- Power Factor Optimization – Managed reactive electricity power generation, reducing total electricity costs by 2% through capacitor bank installation and tuning, achieving ROI within 8 months.
- Product Cost Analysis & Prediction – Established a systematic approach for predicting product costs, factoring in feedstock, chemicals, utilities, labor, and logistics, enhancing financial planning accuracy.

2014-04 - 2014-07

SBR and Utility Plants Operation Head

TJPC (Takht-E-Jamshid petrochemical company)

- Supervised 24/7 plant operations across SBR and utility plants, ensuring adherence to operational and safety standards leading shift teams of 30+ operators and shift supervisors by periodically reviewing plants log sheets, site visits, control system monitoring etc.
- Monitored and managed control systems, ensuring 99.5% uptime for production-critical equipment and ensured real-time response to process deviations, reducing plant shutdown incidents by 30% within four months.

- Managed root cause analyses for 15+ plant incidents, implementing corrective actions to prevent recurrence with the assistance of technical service department.
- Optimized water, steam, and power consumption, reducing plant utility costs, ensured uninterrupted supply of cooling water, steam, and compressed air, preventing downtime in polymerization units.

2013-03 - 2014-04

Junior Commissioning Engineer

TJPC (Takht-E-Jamshid petrochemical company)

- Completed comprehensive theoretical and practical training in Synthetic Rubber Plant operations over period of seven months.
- Actively participated in pre-commissioning, commissioning, and start-up activities for TJPC Utility and Rubber Plants under expert guidance, utilizing system-based approach from TOTAL's OPERCOM methodology.
- Performed detailed process conformity checks and operational tests in alignment with OPERCOM methodology checklists and test sheets, ensuring adherence to operational standards.
- Facilitated and managed Pre-Startup Safety Review (PSSR) committee, including checklist reviews, punch item follow-ups, and verification of plant readiness for start-up.
- Collaborated with cross-functional teams to identify and resolve commissioning challenges, ensuring seamless integration of systems and compliance with project timelines.

2012-06 - 2013-07

Project Site Supervisor

Rahsaz Ouje Pars

- Supervision of the Civil Works of the Artificial Lake Project in a Recreational and Amusement Park
- Preparing 3 contracts for subcontractors
- Coordinate the Financial payment and Insurance affairs of 20 workers
- Follow up on five invoices until their payment is received from the client

2012-04 - 2012-05

Olefin Plant Operator Apprentice

Olefin Plant (1.3MTPA) Jam Petrochemical Company

- Familiarize with the overall plant by studying process description along with process flow diagrams (PFDs) and piping and instrumentation diagrams (P&IDs) and Operating Manual of the plant.
- Observing startup/shutdown/change over sequences of specific plant rotary equipment.
- Collect and log operational data, compare these values to expected ranges and identify potential discrepancies.
- Observe in identifying and resolving operational issues such as fouling, leaks, or equipment malfunctions.
- Preparing detailed apprenticeship report summarizing learnings, challenges faced, and recommendations for process improvements, guided by mentor.

Education

2019-02 - 2019-02

Some College (No Degree): PMBOK 6th Edition Training Course

Ariana

Focused on project management methodologies, tools, and techniques outlined in PMBOK. Covered essential aspects like project scheduling, cost control, and quality management to ensure project success across industries.

2015-04 - 2015-04

Some College (No Degree): Honeywell Experion PKS 50 Training

Petro Fanavar Nirou

Hands-on training on Honeywell control systems. Covered system configuration, graphics building, and control logic implementation for effective process automation in industrial settings.

2007-06 - 2009-08

Associate of Arts: French Language Proficiency

Language Institute (ILI)

Basic training in French communication skills, including vocabulary, grammar, and pronunciation. Enhanced ability to interact in multilingual professional settings.

2005-11 - 2009-08

Associate of Arts: English Language Proficiency (Full Course)

Language Institute (ILI)

Comprehensive English language training covering reading, writing, speaking, and listening skills. Provided a strong foundation for professional and academic communication.

2008-01 - 2012-01

Bachelor of Science: Chemical Engineering

Azad University

- Studied chemical engineering principles, petrochemical processes, and industrial systems. Gained expertise in thermodynamics, reaction engineering, and plant operations, with a focus on the petrochemical sector.
- Founder and Chairman of the Board of Chemical Engineering Society
- Awarded for Best Researcher Student in the University
- Awarded for Top Inventor in The University

Certifications

2019-02	PMBOK 6th. Edition Training Course
2017-05	Process Engineer Expert Training Course
2016-09	Introduction of HazOp Study
2015-08	OHSAS 18001Auditor Training Course
2009-08	Full Course in English
2014-10	Honeywell Experion PKS 50, Fundamental, Configuration, Graphics Building & Control Implementation, Petrofan

Interests

Problem-Solving & Strategy Games, Watching Documentary Films & Movies, Hiking & Outdoor Exploration, playing video games.