126 R, Imperial Gardens, Paragon City,
Lahore, Pakistan. +92 321 9000 179
rehmantauseef@gmail.com
https://tauseef.engoneer.com
https://www.linkedin.com/in/tauseef-rehman

TAUSEEF UR REHMAN

Process Engineering Unit Manager – Ammonia, Utilities

PROFILE:

I am a highly experienced engineering professional with over 17 years of expertise in Process Engineering for Fertilizers, Petrochemical, and Gas plants, specializing in Hydrogen, Ammonia, Amines, and Utilities. My core competencies encompass:

- Process Design Engineering
- Steam Reforming SMR, ATR
- Petrochemical Processes
- Process Design Simulation
- Gray & Blue Hydrogen Concept
- HYSYS, AspenPlus, PROII, ThermoFlow
- Gas Turbines and Steam Turbines
- Process Safety, Risk Management
- Process Hazard Analysis, HAZOP, FMEA
- Cause & Effect and Function Logic Diagrams
- Process Engineering Software development (TurboMart)
- PFDs, P&IDs, HFDs and H&M
- Business Development, Techno-Commercial Feasibility
- ESD and DCS Process Control Logics
- Catalyst Health Monitoring, Replacement & Reduction
- Excel & VBA

JOB EXPERIENCE:

Fatima Fertilizers Limited, Pakistan

Process Engineering Unit Manager | Sep 2016 – present

Leading a team of engineers in developing and implementing process improvement initiatives, resulting in significant cost savings and efficiency gains.

Key Achievements:

- Developed and implemented energy management strategies in Ammonia production facilities based on the Energy Star program, resulting in significant reduction in energy consumption and $1.2 million annual cost savings.
- As part of technical services, conducted / reviewed technical monitoring programs (TMP) at Ammonia production facilities, enhancing group sustainability. These programs included H&M balance across the whole ammonia production complex, health monitoring of reactors (reformers, shift converters, methanation and ammonia converters), CO2 removal system, steam generators, and turbines.
- As part of process improvement initiatives, studied and benchmarked various Ammonia production concepts, including gray & blue hydrogen-based methods.
- Played a pivotal role in technical monitoring and auditing of power plants, fertilizer facilities, and sugar production sites.
- Conducted rigorous engineering design reviews for various projects, including Thar lignite refining, coal gasification for GTL /SNG /IGCC and a 660 MW raw lignite-based power plant.
- Contributed significantly to the due diligence and feasibility study of the 99MW Arkari Gol Hydro Power Project, resulting in a reduced carbon footprint.
- Designed a foundational proposal for a 100 MW Solar PV plant at Bahawalpur Solar Park, aligning with the company's decarbonization vision.
- Developed hydrology simulations for Arkari Gol and Naran HPPs using advanced Excel software.
- Spearheaded pre-feasibility studies on coal fields in Balochistan and Thar Sindh, focusing on mechanized coal mining and gasification.

Arabian Amines Company, Al-Jubail K.S.A.

Process Engineer | Jun 2012 – Aug 2016

Collaborated in multiple production and process enhancement projects aimed at boosting efficiency and sustainability within the joint venture between Huntsman Chemicals U.S.A. and Zamil Group KSA.

Key Achievements:

- Engineered strategic plant modifications, significantly enhancing efficiency and production, resulting in improved product quality and productivity.
- Pioneered the development and management of a statistics-based process simulator for a proprietary PFR (Plug Flow Reactor) using Excel.
- Held a key role as the Management of Change (MOC) coordinator for process and control documentation and implementation.
- Led and coordinated PHAs for proposed process modifications and successfully led multiple root cause analysis (RCA) efforts.
- Ensured unwavering compliance with Process Safety Management (PSM) standards and effectively implemented safety enhancement plans.
- Made substantial contributions to major projects, including Flue Gas Recirculation for utilities boiler and distillation tower internals modification.
- Conducted a thorough site-wide HAZOP revalidation in collaboration with the licensor.

Engro Fertilizers Limited, Pakistan

Process Engineer | Jun 2006 – May 2012

Designed plant modifications to improve control schemes, enhance efficiency, and increase capacity. Additionally, I was responsible for monitoring plant performance and engaging in contact engineering.

Key Achievements:

- Conducted technical monitoring of Ammonia plant along with energy optimization exercises, including reactors (pre, primary & secondary reformers, low and high temperature shift convertors, methanation and ammonia synthesis reactor) profile monitoring and adjustment and plant modifications for improved production and energy indices.
- Conducted multiple optimization evaluations using HYSYS/ GIPS and custom excel worksheet, personally developed for reactor and catalyst health profiling.
- Developed a sophisticated Ammonia plant simulation model using HYSYS and Excel, ultimately optimizing process performance.
- Reviewing EP documents and actively collaborating with construction contractors during the design and construction of one of the largest single train Ammonia Complex.
- Executed a comprehensive feasibility study for a compression station, encompassing compressor package selection and seamless integration.
- Enhanced plant control and ESD systems, leading to a remarkable improvement in safety and reliability.
- Spearheaded unit conversion activities and dynamic simulations for robust control process verification.
- Executed precise catalyst change and reduction during turnarounds, resulting in optimal catalyst performance.
- Played a pivotal role in balancing the CO2 removal system and proposing optimal operating parameters.
- Contributed significantly to compressor restaging and efficiency improvement, thus enhancing site power ratings.

JGC-DESCON Engineering (Pvt.) Ltd. Pakistan
Process Engineer | Aug 2005 – Nov 2005, Jan 2006 - Apr 2006

Key Contributions:

- Contributed substantially to basic and detailed design engineering for various projects, including the basic engineering of an LPG Separation unit for the Sendai Refinery in Japan and FEED Package generation for a Dehydration project.

ACADEMICS

Bachelor of Science - Chemical Engineering
2001 - 2005 | Grade A
University of Engineering and Technology
Lahore, Pakistan

CERTIFICATIONS

- Advance Process Simulations Using HYSYS
- The 7 Habits of Highly Effective People
- Six-Sigma principles
- Negotiation Skills
- Adaptive Leadership for VUCA Challenges
- Creating a Culture of Change
- Crisis Communication
- Critical Thinking for Better Judgment and Decision-Making
- Developing Adaptability as a Manager
- Executive Decision-Making
- Leading Change
- Leading Your Team Through Change
- Doing Good to Build a Profitable Business
- Risk Management

ADDITIONAL PROFESSIONAL SKILLS

- Engineering Software Proficiency: Extensive hands-on experience with engineering software and simulation platforms, including HYSYS, PROII, PIPESYS, HTRI, EDR, AspenPlus, ThermoFlow Suit, and other specialized tools.
- Programming Expertise: Proficient in Visual Basic and Python, enhancing daily office tasks' efficiency.
- Software Development: Spearheaded the creation of versatile, process engineering apps, including "TurboMart," a widely-used tool for optimizing gas and steam turbine performance, driving technological innovation. Same evaluation is also under development at engoneer.com, expanding accessibility.
- Automation Prowess: Developed multiple Excel-based worksheets and engineering applications, aligning with industry standards to automate routine calculations for increased efficiency.
- Effective Communication: Strong communication skills, facilitating clear and concise information exchange within cross-functional teams, resulting in streamlined processes and collaborative success.
- Team Collaboration: Adept at working collaboratively within multidisciplinary teams, fostering a positive and productive team environment to achieve project goals.
- Industry Codes and Standards: Well-versed in Process Industry codes and standards, ensuring compliance and optimal practices in all endeavors.