SHAHZAD AHMAD

Process Engineer

Qualified Professional Chemical Process Engineer with 8+ years of experience in Process Design & Engineering/Production Engineering & Management having Good knowledge in FEED projects & Detail Engineering Projects of O&Gas/Refinery/Petrochemical.

Ahmad had been instrumental in overseeing project activities from conceptualization to execution including Process Design activities, Engineering proposals and FEED verification reports.

Has sound understanding of the industry and technology trends with instituting quality improvement techniques to achieve product excellence with cost effectiveness.

Looking for challenging opportunities in Oil & Gas, Petrochemicals, LNG, Green Hydrogen and Specialty Chemicals sector.

Skills

- Development of Hydraulic Calculations
- Utilities Summary, Relief Load Summary
- CV summary & Calculations
- KORF & Poseidon Hydraulic Package
- PSV Designing as per API Guide-Line API 520, API 521
 API 526
- ASPEN, HYSYS, UNISIM, PROII, PROMAX
- PIPENET, PIPESIM, AFT, ASPEN FLARE
- Modelling and Simulation for HMB
- CV Sizing
 PSFS Preparation.
- Line listing
 Line Sizing.
- Relief Philosophy Control Philosophy
- Control Narrative

Senior Roles

Subject Matter Expert

Associate Technical Professional

Process Engineer

Qualifications & Memberships

B.Tech

Laxmi Narayan Institute of Technology Nagpur

Chemical Engineering

Market Sectors

Oil & Gas, Specialty Chemical sector, LNG, Green Hydrogen

Site Experience

DMCC Gujrat

Country Experience

India

United Arab Emirates

Key Clients

Woodside, S-OIL, DMCC etc

Sonangol, Woodside Energy

Woodside, PTI-ID, Sonatrach, ADNOC and CEPSA

Previous Employers

Worley, Mumbai, India

Petrofac, Mumbai, India

DMCC India

Languages

SHAHZAD AHMAD

- Start-up and operating Guides Preparation
- P&ID Mark-up
- Pump Data Sheet preparation
- Compressor DS, Pumps DS checking provided by Vendors
- Compressor PSV Sizing and Checking.
- Compressor ASV Sizing sheet.
- Review of the CV Data sheet and Case selection hydraulics etc
- Flow instruments sizing
- Compressor Settle-out pressure Calculations
- Process Calculations for Equipment's
- SP PID, PFD, DPDT
- HTRI

Project Role -

Technical Professional / Process Engg

Technical Professional / Good communication skill, Time management, Prioritize and Excecute task as per project Schedule.

Career Highlights

December, 2022 to Present

Process Engineer

MEERAM | Early Detail Engineering and Big invivation | ADNOC Abu Dhabi

Project – MERAM (Maximizing Ethane Recovery & Monetization)

Integral Team Member of The International Team managed from Madrid.

Validating all the Feed Documents for Analyzing Inconsistencies occurred during FEED Stage of the project.

Senior Roles

Subject Matter Expert

Associate Technical Professional

Process Engineer

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Languages

SHAHZAD AHMAD

Performing Hydraulic Calculation on Compressor Circuits using SIMLIN

Updating all the FEED Documents such as PDS, HMB, Hydraulic Calculations, etc. to remove all the inconsistencies.

This facility will reduce the country's dependency on oil imports. Scope required development of FEED deliverables.

Responsibilities included -

- Performed Relief valve sizing calculations.
- Performed equipment sizing calculations.
- Involved in pump hydraulics and preparation of datasheets.
- Line Sizing
- Storage Tank Sizing Feed storage unit
- Pumps Sizing
- Aspen simulation
- Navis Freedom Package
- Mark up using Blubeam Revu 20

DALMA Gas Development | Detail Engineering | ADNOC Abu Dhabi

Dalma is part of the Ghasha Concession which is an important enabler of gas self-sufficiency for the UAE

Two EPC contracts awarded to NPCC and a joint venture between Técnicas Reunidas and Target Engineering

70% of award value will flow back into the UAE's economy under ADNOC's successful In-Country Value program

ADNOC to further optimize costs and reduce emissions of the wider Ghasha Concession as it updates the FEED to accelerate integration of carbon captureLNG plant modification for Pluto/Scarborough site

- Working as
 Process Engineer for project, leading a team of designers & engineers to deliver quality design packages on schedule.
- Worked Collaboratively with the Client daily to meet the requirements.
- Preparing & Maintaining DCI (Document Control Index)

Senior Roles

Subject Matter Expert

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${\sf CV}$

SHAHZAD AHMAD

- Monitoring project man-hours
- Maintaining Change Log Register (CLR)
- Assuring maintenance of check copies.
- Ensuring timely delivery of all process deliverables as per the project schedule
- Review of Basic engineering documents such as Process Flow Diagrams, Pump summaries, Utility Summary, etc.
- Preparation of process datasheets for Plate & Frame Heat Exchangers
- Thermal design of Shell & Tube Heat Exchanger
- Achieved all the major milestones despite having a relatively small team with minimum to no extra efforts.
- Control Valve sizing
- Compressor DS checking provided by Vendors Bakers Hughes, Siemens etc
- Preparation of pump and line hydraulics

March, 2022 to December, 2022

Associate Technical Professional

Lobito Refinery | Sonangol | FEED Updation | Nigeria

FEED update for all process Units, Utilities, Off sites.

Sonangol Plans to build a refinery with 200,000 BPD capacity near Lobito, Angola. Full conversion refinery originally designed to process heavy, high TAN crudes, now revised to low TAN light.

This facility will reduce the country's dependency on oil imports. Scope required development of FEED deliverables.

Responsibilities included -

- Performed Relief valve sizing calculations.
- Performed equipment sizing calculations.
- Involved in pump hydraulics and preparation of datasheets.
- Line Sizing
- Storage Tank Sizing Feed storage unit
- Pumps Sizing

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- Aspen simulation
- Navis Freedom Package
- Mark up using Blubeam Revu 20

Pluto T1 Scarborough Modification Feed_M802 | Woodside | Basic Engineering | FEED | Western Australia

Woodside is pursuing an opportunity to process Scarborough field reserves using the existing pluto liquefied Natural Gas (LNG) Train 1 facilities. The existing pluto LNG train 1 was designed to process Pluto gas, a rich feed gas. Scarborough gas is a biogenic gas with little ethane and only trace amounts of heavier hydrocarbon components. As a result, modification to the existing Train 1 facilities are required to enable the processing of Scarborough gas in both blended with Pluto gas (Phase 1) and 100% Scarborough gas. (Phase 2).

LNG plant modification for Pluto/Scarborough site

- Assisting in all project activities
- Control Valve sizing
- HMB
- Aspen Hysys simulation
- Poseidon Hydraulic
- P&ID Markup
- Control Valve sizing
- Compressor DS checking provided by Vendors Bakers Hughes, Siemens etc
- Preparation of pump and line hydraulics
- Review of vendor Doc
- Relief system line hydr
- Preparation of HMB and Line List.
- Preparation of CV Data sheet.
- Review of the CV Data sheet and Case selection and hydraulics

Senior Roles

Subject Matter Expert
Associate Technical Professional

Process Engineer

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H2OK project | Woodside USA| Basic Engineering | FEED |Liquid Hydrogen| Ardmore Oklahoma USA

Woodside USA Inc is delivering the Ardmore Liquid Hydrogen (LH2) Project which features the phased construction, commissioning and start-up of a 90 tpd liquid hydrogen production facility located in Ardmore, Oklahoma.

Supporting Houston Office in Basic FEED activities for Balance of Plant/OSBL are Utility s and Summary, Liquid hydrogen storage & Truck loading Bay

- Control Valve Basic
- Hydraulic on Poseidon
- Aspen Hysys simulation
- Pump Sizing
- P&ID Markup
- Electrolyser from Cummins, Nel, Plug power and Siemens Doc checking as per req.
- Air liquid, Linde liquefaction Doc checking as per process req.

August, 2019 to March, 2022 – Process Engineer
SHAHEEN Project Onsan Refinary | S-OIL Corp. | Basic
Engineering | Detail Engg | South Korea
(Worley, Navi Mumbai)

- Process safety philosophy
- Steam Cracker Complex (SSC) unit at S-OIL Corporation Onsan Refinery South Korea.
- Thermal Crude to Chemical (TC2C) Unit.
- PSV Designing using different contingencies like Fire,
 Blocked Outlet, Super Critical fire, Gas
- blow by scenario
- Amine gas treating, Sulphur recovery, petroleum

Senior Roles

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DMCC India

Languages

${\sf CV}$

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refinery planning and Troubleshooting.

- PSV designing in Sulphur Recovery Unit (SRU)/ Mon ethanolamine (MEA).
- Sour Water stripper (SWS) reliability.
- Tail Gas Treating Unit (TGTU) section reviewed.
- Amine Regeneration Unit (ARU) PSV-Sizing reviewed and evaluated.
- Amine Regeneration Unit (ARU) Relief Valve evaluated.
- Simulation of Treating Process
- PSV Hydraulic Calculations as per API guideline.
- Hydrocracker and Hydro treating Unit Safety Valve Design
- Pumps Hydraulic Calculations
- Control Valve Sizing
- Line list preparation
- Process simulation using UNISIM
- Safety valve Reviewing
- PRV -Scenario Analysis, relief load calculation and preparation of report.
- Line sizing calculation
- KORF Hydraulic calculation for CV sizing

PEMEX Industrial Transformation Project | PTI
INFRAESTRUCTURA DE DESARROLLO, SA DE CV | FEED |
Paradise, Tabasco | SWS & ARU Unit

Petróleos Mexicanos (PEMEX) will build a new 340 MBPSD refinery to process 100% Mayan crude. The installation site will be in Dos Bocas, in the Paraíso Municipality, Tabasco. This new refinery will increase the supply of gasoline and diesel that meets the growing demand for domestic fuel company.

Responsibilities included:

- P&ID development for SWS and utility system.
- Performed vessel sizing calculations.
- Performed pump hydraulics and preparation of

Senior Roles

Subject Matter Expert

Associate Technical Professional

Process Engineer

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SHAHZAD AHMAD

datasheets.

- Performed tank vent sizing calculation.
- Preparation of datasheet for various equipment.
- Preparation of line list.
- Validation of vessel sizing and pump hydraulic calculations.
- Provided process inputs for Material Selection Diagram.

Block 406A RKF Redevelopment Project | Sonatrach and CEPSA | BED/FEED | Onshore | Algeria

The RKF Upgrade Project's main goals were to raise gas re-injecting capacity through development of a new gathering and central processing unit, develop a new overhead line in order to connect RKF to the Algerian national grid and a general upgrade of control system implementing an integrated control and safety system. Scope included development of BED and FEED deliverables.

Responsibilities included:

- Line sizing for CPF and off sites.
- Hydraulic calculations.
- Preparation of equipment list.
- Process deliverables (PFD, UFD and P&ID) back check.
- Preparation of utility P&ID's.
- Preparation of RKF legend P&ID's.
- Preparation of distribution P&ID's.
- Preparation of line list.
- Preparation of utility summary.
- Extraction of HMB data from Hysys simulation.

Sept, 2018 to July, 2019 - Process Engineer

DMCC Speciality Chemicals | Indian Clients | Detail Engineering | Gujrat India

- Multipurpose Plant MPP management.
- Process simulation on Open source
- Safety valve DS
- Onsite trouble shooting.
- Line sizing calculation

Senior Roles

Subject Matter Expert

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Site Experience

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Key Clients

Woodside, S-OIL, DMCC etc

Sonangol, Woodside Energy

Woodside, PTI-ID, Sonatrach, ADNOC and CEPSA

Previous Employers

Worley, Mumbai, India

Petrofac, Mumbai, India

DMCC India

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SHAHZAD AHMAD

- Material Balance & Optimization
- HAZOP studies
- Multipurpose Plant (MPP) for Manufacturing of Specialty Chemicals like BSCl, PCBSCl, Lasamide, BSA.
- Production management

May, 2015 to Aug, 2018 - Process Engineer

Probite Design Consultancy | Detail Engineering | FEED | Pune India

- Pump Hydraulic Basic
- Control Valve
- Safety valve sizing
- P&ID markup
- Line Listing

P&IDs, Line List, Hydraulic calculations for pumps and control valves, supporting calculations & capacity calculations of Dry Vacuum Pumps, Process Data Sheets for mechanical equipment & instruments, etc.

Preparation of Control Philosophy, Control Narrative, & Control Logic

Drove Preparation of P&IDs for UPI-20 Plant, guided a team of 2 engineers & 2 Drafters/Designers for the same. Achieved all the major milestones.

Vendor Document Review of Heat Exchangers, Vessels, Pumps, etc.

Senior Roles

Subject Matter Expert

Associate Technical Professional

Process Engineer

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Previous Employers

Worley, Mumbai, India

Petrofac, Mumbai, India

DMCC India

Languages

Project Summary

Year	Client	Project Name	Project Location	Project Type	Project Scope	Project Role
2023	ADNOC UAE	DALMA Gas Development.	Abu Dhabi UAE	Onshore Oil & Gas	Detail Engineering	Process Engineer
2023	ADNOC UAE	MERAM Engineering.	Abu Dhabi UAE	Onshore Petrochemical	FEED Validation- Early Detail Engineering	Process Engineer
2022	Sonangol	Sonangol Lobito Refinery FEED Update Project	Angola	Onshore Refinary	FEED Modification	Associate Technical Professional
2022	Woodside Energy	H2OK project	Okalama USA	Onshore	FEED	Associate Technical Professional
2022	Woodside	Pluto Train 1 Scarborough Modification Feed project	Western Australia	Onshore	FEED	Associate Technical Professional
2021	S-OIL Corp.	SHAHEEN Feed Project	South Korea	Onshore	FEED	Process Engineer
2020	PTI-ID	PEMEX Industrial Transformation	Mexico	Refinery	FEED	Process Engineer
2019	Sonatrach and CEPSA	Block 406A RKF Redevelopment Project	Algeria	Onshore	BED/FEED	Process Engineer
2018	Finnar Grp Meghmani Ltd	Specialty Chemicals	India	Onshore	Details Engineering	Process engineer/Production engg

2016	Griffin Energy	Yemen Trunkline Design & Development Project.	Yemen	Onshore	Detail & FEED	Process Engineer
2015	UPL	Project – UPI-20 Client – UPL Limited (Gujarat India)	India	Onshore	Detail Engg	Process Engineer

Company Summary

Year	Company	Project Location	Employment Type	Project Scope	Project Role
2023	Tecnica's Reunidas	Abu Dhabi, UAE	Project Contract	FEED, Detail Engineering	Process engineer
2022	KBR Inc	Chennai, India	Company Contract	FEED, Detail Engineering	Associate Technical Professional
2021-2022	Petrofac	Mumbai, India	TP Contract	FEED, Detail Engineering	Process engineer
2019-2021	Worley	Mumbai, India	TP Contract	FEED, Detail Engineering	Process engineer
2018-2019	DMCC	Bharuch, India	Permanent	Plant Process Engineering	Production Engineer/Process Engineer
2016-2018	Probite Design Consultancy	Pune, India	Contract	Details Engineering	Process engineer
2015	HSPL Pune	Pune, India	Permanent	Subject matter expert	Chemical Engineering, physics

Other Experience

Year	Description	Role	
	HSPL Pune		
2015-2016	Chemical Engineering simulation		
	Process calculation	Subject Matter Expert	
	Mass transfer calculations		
	 P&IDs, Line List, Hydraulic calculations for pumps and control valves, supporting calculations & capacity calculations of Dry Vacuum Pumps, Process Data Sheets for mechanical equipment & instruments, etc. 		
	Preparation of Control Philosophy, Control Narrative, & Control Logic		

Personal Details:



IT Skills:

General : MS Office 365, Word, Excel, Power Point, Share Point, Outlook

Professional : Operating Systems, Linux CLI, Virtual Machine, AWS S3, Pipe Line CI CD

SQL, Python