HAFIZ MUHAMMAD ABUBAKAR |M.Sc Chemical Engineering|

Sr. Process Engineer (Oil, Gas & Energy)

Cell #: 00971-543602732
Email: hafiz.abubakar99@yahoo.com
LinkedIn: https://www.linkedin.com/in/process-engineer-hafiz-abubakar/

Narrative Summary of Skills & Experience

I am **Sr. Process Engineer** having more than **11+ years experience** in Oil & Gas industry. Skilled in FEED and detailed design for green and brownfield projects like Compression, Dehydration, Gas Sweetening, Fuel Gas Conditioning, and HCDP and in all aspects of process engineering including Simulation, Sizing calculations, P&IDs & process studies / reports.

TECHNOMAK ENERGY INTERNATIONAL FZC, Dubai, UAE
(April 2022, – Till Date)

Working as **Lead Process Engineer** in TECHNOMAK which is an integrated Engineering, Design, Fabrication & Erection company geared to serve the growing needs of Offshore, Oil & Gas, Marine, Power, Metallurgy & Infrastructure project requirements of the Middle East, Africa, Far East, Europe and Indian Sub-Continent.

AIN ENGINEERING SERVICES Pvt. Ltd *(JV with Enerflex Middle East & Africa)*
(October 2015, – January 2022)

AIN Engineering Services is providing Engineering and procurement consultancy to ENERFLEX Limited (MEA, and Houston), Schlumberger (MEA) and OMV Pakistan for both projects and proposals. Complete process simulation & sizing, process design modeling and instrumentation being the key services provided on several projects and proposals.

AGRITECH Ltd. (formerly Pak American Fertilizers Limited)
(September 2013 – October,2015)

I have worked more than 02 years as Process / Production engineer in process Industry i.e. mainly Ammonia plant of M.W Kellogg process. I have complete familiarization with PFD, P&ID, startup, Shutdown, plant emergencies, Plant optimization, Energy Saving Projects, Plant Management, Annual turnaround planning & execution, Inspection of plant equipment, Modification/Revamping, Training of Engineers & Operators.

Key Technical Expertise and Skills

- Simulation on Aspen Hysys / Unisim (Gas Compression, TEG Dehydration, Amine Sweetening, LPG, Heavy Oil Treatment, Sour Water Treatment)
- Single and two-phase line sizing using aspen HYSYS.
- Development of equipment and Instrument data sheets.
- PSVs sizing / relief load calculations for Blocked flow case, Fire case, Control valve failure case, Thermal case and Exchanger tube rupture case.
- Technical / Bid Documents review
- Responding to Client’s clarification and Attending Post Bid Clarification Meetings.
- Preparation of PFDs, P&IDs & Datasheets.
- Generation of RFQs for vendor equipment e.g. Heat exchanger, Pumps, Compressors, Filters, Valves and other instruments.
- Review of vendor technical proposal and responding to vendor quires.

- Coordination with vendor for technical issues and selection of proper design.
- Hydraulic analysis of the utility and process areas.
- Preparation of line list and equipment list and other process documents.
- Flare Network sizing, also have good command on Flare Network Evaluation Report.
- A good command on cause and effect matrix evaluation.
- Study of Control and shutdown philosophies.
- Control valve sizing, PSV sizing, KO vessel and separators sizing.
- Calculation of Plant Utilities (Fuel Gas, Hot Oil, Propane, Instrument Air etc.)
- To take care of Compliance to Client's specifications as well as to relevant Codes and Standard e.g. APIs, GPSA and KOC standards etc.
- Shift operation activities at Ammonia plant, monitoring process parameters, provide advices & instructions to alter operating parameters, controlling planned & emergency shutdown in collaboration with Shift Manager.
- Arrange maintenance through the appropriate channel, ensuring that equipment is isolated, clean & free of toxic gases, issue "Permits to Work" with relevant approval where necessary & ensuring that jobs are completed safely.
- Leading the production and maintenance teams in the shift to efficiently use the man power.
- Ensure the smooth handover of the plant to incoming shift and complete the shift reports including log book and log sheet showing all activities during the shift.
- Chemical cleaning of heat exchangers and flushing of vessels and pumps.
- Participating in detailed operational training of new employees and reviewing their training work assignments.
- Implementation of SOPs during start-up and shut-down of plant.
- Draining, Depressurization, Heating and Cooling Procedures
- Purging, Priming, Flushing and Changeover of Pumps
- Lube Oil, Control Oil and Sealing system of Compressors and Turbines

Project Categories:

- Wellhead Fluid Separation
- Gas Sweetening (H_2S and CO_2 removal from natural gas)
- Gas Dehydration (Using Glycols and Molecular Sieves.)
- Hydrocarbon Dew point control using JT valve and Propane Chilling
- Mechanical refrigeration/propane chilling Loop
- Crude / Condensation Stabilization
- LPG recovery Unit
- Fuel Gas Treatment
- Gas compression

Recently worked on following projects:

- **OKWOK OML-67 FPSO Topside (Client - World Carrier Corporation)**
  Project Details:

  ORIENTAL and its partner ADDAX are planning to develop the Okwok field, located in Block OML 67, Offshore Nigeria. The development concept will involve a wellhead platform (WHP) next to a Floating Production Storage and Offtake Unit (FPSO) production unit containing the oil processing equipment, gas lift, gas injection and water injection equipment together with supporting utilities. Well fluids from the wellhead platform will be sent to the FPSO where the gas, oil and water will be

separated and treated. Dehydrated stabilized oil will be stored and offloaded on a periodic basis to a suitable tanker.

Technomak's scope includes conceptual development, process engineering, detailed engineering, procurement, fabrication and supply of Topside Modules for Oil Separation and Treatment, Produced Water Treatment, Gas Compression and Dehydration, Flare Knockout and Closed Drain System, Power Generation and Electric House facility.

- **ON-SHORE – ERAWIN EPF (Client: ALFANOIL / End User – Sirte Oil Company)**

  Project Details:

  This Project involves a Complete EPF system which includes Separators, Electrostatic Coalescer, Produced Water Treatment, Flare System and all other utilities.

- **Execution Non Associated Gas Compression Facilities, Phase-I (Client: Tatweer Petroleum Bahrain)**

  Project Details:

  The objective of this project is to meet the demand for Maudded Gas Injection (MGI) and Sales gas. This project is executed on Build, Own, Operate & Maintain basis for 10 years. This project has compression stations of capacity 240 MMSCFD gas, containing Feed Gas Cooling and Separation, Gas Compression, Discharge Scrubber, Gas Metering and Export. This project also has liquid export system and utilities containing Fuel Gas System, Flare System, Closed Drain System, Instrument Air System and Chemical Injection System.

  Scope includes conceptual development, process engineering, detailed engineering, procurement and fabrication of all process unit and utilities.

- **Execution Non Associated Gas Compression Facilities, Phase-II (Client: Tatweer Petroleum Bahrain)**

  Project Details:

  The objective of this project is to meet the demand for Maudded Gas Injection (MGI) and Sales gas. This project is executed on Build, Own, Operate & Maintain basis for 10 years. This project has compression stations of capacity 280 MMSCFD gas, containing Feed Gas Cooling and Separation, Gas Compression, Discharge Scrubber, Gas Metering and Export. This project also has liquid export system and utilities containing Fuel Gas System, Flare System, Closed Drain System, Instrument Air System and Chemical Injection System.

  Scope includes conceptual development, process engineering, detailed engineering, procurement and fabrication of all process unit and utilities.

- **KOC - Installation of New LP Lean Compressor at BS-180:**

  Project Details:

  This is mainly 450 MMSCFD gas compression project. In this facility which we have Inter-Stage Coolers and Scrubbers, Gas Compression Unit, Condensate Pumping System, and Utility Systems.

- **Basic Engineering for KOC - Heavy Oil Production Facility at Umm Niqa, Kuwait:**

  Project Details:

  This is Heavy Oil Production Facility which produces 16500 BPD of heavy oil. It contains Inlet Heating and Separation, Dehydration, Desalting and Oil Sweetening through stripping process. Produced Water is also treated and exported.

- **Basic Engineering for KOC - Jurassic Production Facility (JPF) at Sabriya, Kuwait:**

  Project Details:

  The facility has Gas-Oil separation, Oil Dehydration and desalting, Oil Stabilization, Crude metering and export, Gas Compression, Gas Dehydration, Gas Sweetening, Gas metering and Export, Produced Water treatment system and storage with associated utilities.

- **EPC for Wellhead Compression Pilot Project (ADCO):**
  Project Details:

  This is mainly 20 MMSCFD gas compression project. In this facility which we have Inlet Cooling and Separation, Gas Compression Unit, Liquids Pumping System, and Utility Systems. This is an unmanned facility and comprises of fully automatic control system with a small requirement of man power. Below activities are performed on this project:

  Complete Process Design which included Process Simulation, Design Basis, Equipment & Instrument Sizing, P&IDs, PFDs, PFS, Datasheets, Line & Equipment List, H&M Balance, Utility Consumption List, HAZOP & HAZID Report, Control Safeguarding Philosophy and Shutdown Narrative, Steady State Hydraulic Study Report, Process Safeguarding Philosophy, Flare Network Study.

EDUCATION

2016	**M.Sc.** Chemical Engineering	3.22 CGPA	I.C.E.T. University Of The Punjab, Lahore
2012	**B.Sc.** Chemical Engineering	3.23 CGPA	I.C.E.T. University Of The Punjab, Lahore

ENGINEERING SOFTWARE

- Aspen HYSYS (User Certified)
- Aspen FlareNet / Flare System Analyzer
- UNISIM
- Fisher Specification Manager (Control Valve sizing)
- Size Master (PSVs sizing)
- Daniel (For Orifice sizing)
- Microsoft Office (Word, Excel, Power Point & Visio)