

# Muhammad Ahmad Raza

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## Profile Summary

Process Engineer having **13** years working experience, 2 years of Process operation & 11 years of enriched hand on experience in Engineering Design for Oil & Gas, Fertilizers & Petrochemical sectors. Having Experience in EPC projects execution, project coordination with client and amongst the Engineering disciplines with excellent communication, motivational, organizational and interpersonal skills.

## Professional Skills

- Development of PFDs, P&IDs etc.
- Hydraulic analysis and line sizing calculations.
- Good in Process Simulation & equipment sizing
- Pressure Safety Valve Load Calculation & Sizing
- Emergency and Vent Calculations
- Design & Thermal rating of Shell & Tube Heat Exchanger.
- Fire water network analysis and hydraulics
- Involved & supporting HAZOP and SIL studies
- Scheduling & Planning to complete the projects on time
- Involved in conceptual studies, scoping and coordination with client
- Technical Bid Evaluation of Process Equipments & Field Instruments.
- Awareness and utilization of ARAMCO, API, NFPA codes & standards.
- Awareness of ARAMCO, KBR & JGC works procedures.

## Experience

### Senior Process Engineer at KBR-AMCDE, Al Khobar, Saudi Arabia

January 2012 – till to date

### Process Engineer at Descon Engineering Pvt. Ltd. (Formerly JGC-DESCON Engg. Pvt. Ltd.), Pakistan

September 2009 -January 2012 (2 years 4 months)

### Process Instrument & Control Engineer at Descon Engineering Pvt. Ltd. (Formerly JGC-DESCON Engg. Pvt. Ltd.), Pakistan

August 2006 -August 2009 (3 years 1 months)

### Process/Operation Engineer at Rupafil Polyester Limited (Petrochemical Plant), Pakistan

June 2005 -July 2006 (1 year 1 month)

### Process/Operation Engineer at Zaman Paper & Board Mill, Pakistan

May 2004 -May 2005 (1 year 1 month)

## Education

### M.Sc. Chemical Engineering, 2009

University of Engineering and Technology, Lahore, Pakistan

### B.Sc. Chemical Engineering, 2004

University of the Punjab, Lahore, Pakistan

## Computer Literacy

### Engineering Software

Aspen Hysys, HTRI, Flarenet, UNISIM, PIPENET, Promax, Poseidon (KBR in-house hydraulics software), Best Pipe (JGC in-house hydraulics software), Flaresim

### Microsoft Standard Packages

Microsoft Office (Excel, Word, Visio, PowerPoint)

## **Work History**

**Employer:** KBR – AMCDE (January 2012 – To Date)

**Position:** Sr. Process Engineer

**Company Profile:** KBR-AMCDE is a joint venture of KBR (67%) & AMCDE (33%), handling Study, FEED & Detailed Design Projects of Oil & Gas and Petrochemical industries. KBR-AMCDE is one of the GES+ contractors of ARAMCO.

### **Key Responsibilities:**

- Development & Updates of PFDs & P&IDs
- Hydraulic analysis and line sizing Calculations
- Pump and Vessel Sizing
- PSV Relief Load Calculation and Sizing
- Emergency and Vent Calculations
- Thermal Radiation Calculation
- Prepare process data sheet for Equipments & Instruments
- Flash & Depressurization Calculations
- Fire/Foam water Demand Calculations
- Fire water network analysis & hydraulics
- Prepare Line Index
- Prepare work plan to execute the projects

### **Major Projects**

### **Client**

Propane Loading Facility – Wasit Gas Plant	ARAMCO
T25 Gasoline Transfer System – Ras Tanura	ARAMCO
Sour Water Stripping & Disposal System	ARAMCO
Mercury Removal from Pentane	ARAMCO
Technical Services Jobs	SATORP
Increase Jazan-Abha Pipeline (JAPL) Capacity (Study + FEED)	ARAMCO
Khafji to Tanajib Gas Handling & Compression (Detailed Design)	ARAMCO
Relief Valves Routing to Flare System, Abqaiq Plants (Conceptual Design Study)	ARAMCO
Upgrade Abqaiq Plants Oil and Oily Water De-Inventory and Recycle Systems (Detailed Design)	ARAMCO
Upgrade Fire Water Systems of ARAMCO Bulk plants (Study + FEED + Detailed Design)	ARAMCO
Upgrade Riyadh Refinery Industrial Closed Drain System (FEED)	ARAMCO
Installation of Jump Over Lines (Khursaniyah Gas Plant) (Detailed Design)	ARAMCO
JAZAN Refinery and Marine Terminal FEED Project, KSA	ARAMCO

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**Employer:** Descon Engineering (Pvt.) Ltd, Pakistan (Formerly JGC-DESCON Engg. Pvt. Ltd.), (August 2006 – January 2012)

**Position:** Process Engineer / Process Instrument Control Engineer

**Company Profile:** Descon Engg. is a leading EPC Organization, handling detail design projects of Oil & Gas, Petrochemical industries & Power Plants.

**Key Responsibilities:**

- Hydraulic analysis and line sizing Calculations
- Review / Modification and Updating of Piping & Instrument Diagrams (P&IDs)
- Thermal design & rating of Shell & Tube Heat Exchanger using HTRI
- Prepare process data sheet for Equipments & instruments
- Knock out drum, Separators & Tanks Sizing/Design
- PVRV and Emergency vent calculations
- Review / Modification Process Flow Diagrams (PFD)
- Prepare Design Pressure/Temperature map
- Control Valve & Flow Instrument Sizing
- Technical Bid Evaluation of Process Equipment's & Field Instruments

**Major Projects (Detailed Design)**

**Client**

Asphalt Blowing Unit Project, Pak Arab Refinery, Pakistan	PARCO
Ras Gas Barzan Onshore Project, Qatar	RAS GAS
Bulk Liquid Chemical Terminal Project, Arabian Chemical Terminal, KSA	ACT
ENGRO CO2 recovery Project, Pakistan	ENGRO
Fertil Urea Debottlenecking Project, UAE	FERTIL
Installation of HIPPS and Upgrade of Wellhead Control System, UAE	ADCO

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**Employer:** Rupafil Polyester (Pvt.) Ltd. Pakistan (June 2005 - July 2006)

**Position:** Process / Operation Engineer

**Company Profile:** Rupafil Polyester is a petrochemical plant, producing PET chips and polyester fiber.

**Key Responsibilities:**

- Working on DCS based continuous Polymer (Petrochemical) Plant
- Esterification reaction control and process parameters optimization
- Handling the operation of PLC based oil burner heater
- Better understanding of functions of PID, Cascade & SplitRange Controllers
- Handle trouble shooting of Plant
- Monitoring of Schedule Switching
- Ensuring the availability of standby Equipments
- Handling of emergency situations like fire, injury and major leakage

- Take care of overall plant, HSE facilities
  - Coordination with other departments such as Instrumentation & Maintenance during troubleshooting and malfunctioning of Plant/ Equipment
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**Employer:** Zaman Paper & Board Mill, Pakistan (May 2004 - May 2005)

**Position:** Process / Operation Engineer

**Company Profile:** Zaman Board Mill is one of the big board paper producing industry in Pakistan.

**Key Responsibilities:**

- Supervise all manufacturing activities including Processing of Sodium Sulphite, pulping & bleaching of wheat straw, Quality Management & utility operations.
- Manage Shifts Operations by Production & Labor Management; Work Planning, & Inventory Control.
- Handling of emergency situations like fire, injury and major leakage
- Take care of overall plant, HSE facilities