

# Muhammad Aftab Raza

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Transferrable Iqama | Willing to Relocate

## PROFESSIONAL SUMMARY

A results-driven MEP Engineering Professional with over **5 years of experience** in project delivery, QA/QC, and precision estimation. Seeking to leverage expertise in managing multi-disciplinary MEP projects from tender to handover, ensuring strict adherence to budget, timeline, and quality standards. Combines strong technical acumen in MEP design, testing & commissioning, and value engineering with robust commercial and leadership skills to drive project success.

## Certifications & Training:

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- Quantity Surveying Noble Quantity Surveyors (Dubai)
- Estimation and Costing ,Udemy(2025)

## Skills:

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- **Technical:** MEP design & drafting (AutoCAD), electrical load analysis (ETAP), power system design, MV/LV systems, transformer & switchgear commissioning, QA/QC inspections (ITPs, NCRs), testing & commissioning, estimation & BOQ preparation (PlanSwift), project management (MS Project), data visualization (Power BI).
- **Other:** Team leadership, vendor coordination & procurement, quality control, stakeholder management, value engineering, FIDIC contracts & claims, MS Office Suite (Advanced).

## Professional Experience

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### QC Mechanical Engineer

(Mar 2025 – Oct 2025)

#### SEPCO, Saudi Arabia (CS/HDPE Pipe Line Jafurah Desalination Project)

- Prepare and submit **RFIs** (Request for Inspection) to the client for ongoing construction and installation activities.
- Conduct inspection and testing for **pipng systems, pressure vessels, pumps, valves**, and other mechanical equipment as per approved **ITPs and project standards (ARAMCO / SWCC / etc.)**.
- Verify material certificates, calibration reports, and test records before installation.
- Monitor **hydrostatic and pneumatic testing**, flushing, and reinstatement activities.
- Ensure all works are carried out according to approved drawings, specifications, and QA/QC procedures.
- Maintain inspection records and assist in preparation of **Inspection and Test Reports (ITR)**.
- Coordinate with client inspectors during **hold and witness points**.
- **Report non-conformities (NCRs)** and verify corrective actions.

## MEP Project Engineer | Azcon International

(May 2023 – Feb 2025)

**Project:** Large-Scale Construction & Infrastructure Project

- **Managed the complete electrical project lifecycle** for a large-scale construction project, from initial design and planning through to final testing, commissioning, and handover.
- **Developed the complete electrical design package**, including single-line diagrams (SLDs), load flow calculations, equipment layout drawings, and specifications for UPS systems, generator integration, and power distribution.
- **Performed detailed electrical load calculations** for the entire facility to accurately size transformers, main distribution boards, cables, and the backup power system (UPS & Generators).
- **Led the on-site QC for all electrical works**, conducting rigorous inspections from initiation through to execution to ensure 100% compliance with project specifications and safety standards.
- **Supervised the installation, testing, and commissioning** of all critical electrical equipment, including:
  - **Power Systems & Switchgear:** MV/LV Transformers, **MV/LV Switchgear Panels**, and Motor Control Centers (MCCs).
  - **Distribution:** Main & Sub-Distribution Boards (MDBs, SDBs), **Automatic Transfer Switches (ATS)**, and **Power Factor Correction (PFC) Panels**.
  - **Backup Power:** Uninterruptible Power Supply (UPS) systems and Generator sets.
  - **Wiring & Protection:** Complete cabling (HV/LV), earthing & lightning protection systems, and busbar trunking.
- **Served as the primary electrical technical authority**, coordinating with clients, consultants, and other engineering disciplines to resolve design and site execution conflicts.
- **Utilized BIM models and coordination drawings** to pre-emptively identify and resolve spatial clashes for electrical conduits, busways, and cable trays.
- **Managed electrical procurement and vendor coordination**, ensuring the timely delivery of all electrical materials and equipment to meet project schedules and budgets.

## MEP Estimation & Quantity Surveying Engineer | Gift Safety Services

(Aug 2020 – Feb 2023)

- **Led end-to-end estimation and quantity surveying** for comprehensive **MEP packages (HVAC, Electrical, Plumbing, Firefighting)** from initial **tender** stage.
- **Analyzed tender documents**, including **FIDIC contract** conditions, to identify project requirements, risks, and contractual obligations.
- **Prepared precise Bills of Quantities (BOQs), material schedules, and cost breakdowns** for all MEP disciplines to form the basis of competitive bids.
- Conducted detailed **rate analysis** aligned with **FIDIC principles** and performed **material cost forecasting** for accurate project budgeting.
- Performed accurate **quantity take-offs** for MEP services using **PlanSwift, Revit, AutoCAD**, and manual measurement methods.
- **Managed** the preparation, submission, and negotiation of **interim and final payment applications (billing)** to clients, in accordance with contract terms.

- **Led** pre-and post-tender **meetings with clients and consultants** to clarify bidding documents, **negotiate variations**, and resolve contractual matters.
- **Secured consultant approval** for all technical submittals, method statements, and variation claims.
- **Implemented value engineering** for MEP systems to achieve significant **cost savings** while adhering to project specifications.

## Education:

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- **B.E. Mechatronics Engineering**, NUST (College of EME), Rawalpindi, Pakistan.
- **Key Coursework:** Power Systems and Distribution Networks, Control Systems and Automation, Renewable Energy Technologies, Electrical Machines and Drives, Robotics and Embedded Systems

## Languages

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- English: Fluent
- Urdu: Fluent