

AYAD JAHANGIR

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CAREER SUMMARY

Results-driven Mechanical Engineer with 7+ years of combined experience across MEP design, site execution, quality control, and energy engineering in large-scale commercial, industrial, and aviation projects. Proven expertise in HVAC design, fire protection systems, plumbing engineering, cooling load analysis, and MEP coordination using international codes including NFPA, ASHRAE, IPC, and CIBSE. Skilled at leading site activities, preparing technical submittals, managing procurement, and ensuring code compliance. Recognized for improving workflow efficiency, reducing operational costs, and delivering high-quality engineering solutions within budget and deadlines. Adept at collaborating with multidisciplinary teams and driving continuous improvement across project cycles.

CORE COMPETENCIES

- **MEP Design & HVAC Engineering** – Cooling load calculations, ventilation design, duct sizing, equipment selection
- **Fire Protection & Safety Systems** – NFPA-13 compliance, sprinkler layouts, fire pump sizing, civil defense approvals
- **Plumbing & Drainage Engineering** – Water supply, drainage layouts, HDPE piping, pump head calculations
- **Site Execution & Project Supervision** – MEP installation, workflow planning, contractor coordination, QA/QC
- **Energy Engineering & Audits** – Energy conservation measures, cost-saving strategies, efficiency improvements
- **Quantity Surveying & Documentation** – BOQ preparation, material take-off, technical reports, progress monitoring
- **Software Proficiency** – AutoCAD, Revit HVAC, CHVAC Elite, Primavera P6, MS Office
- **Leadership & Cross-Functional Coordination** – Team supervision, stakeholder communication, problem-solving

EXPERIENCE

MEP ENGINEER – ASAS BASES COMPANY LTD, Riyadh, KSA.

Dec 2024 - Present

- Lead MEP technical site operations for King Khalid International Airport T4 Expansion, ensuring compliance with NFPA, ASHRAE & IPC standards.
- Designed mechanical systems for private villas, optimizing system performance and reducing design rework by 15%.
- Prepared and processed MIRs, WIRs, and QC documentation, improving approval turnaround time by 30%.
- Coordinated MEP activities for Greenhouse KSU Project, enhancing workflow efficiency and reducing delays by 20%.

ENERGY ENGINEER – Energy Associates, Lahore, Pakistan.

Mar 2024 – Nov 2024

- Conducted detailed energy audits, achieving 10–18% energy savings for multiple commercial clients.

- Evaluated renewable and sustainable technologies, recommending cost-effective solutions that reduced operational costs.
- Developed optimized energy conservation plans and educated clients on efficient system usage.
- Identified performance gaps in existing systems, improving reliability and reducing breakdown frequency by 12%.

MECHANICAL ENGINEER – M. Munif Al Otaibi Est., Riyadh, KSA.

Jul 2022 – Feb 2024

- Supervised installation of HVAC, plumbing, and firefighting systems for commercial and residential projects.
- Performed cooling load calculations using CHVAC Elite, improving accuracy of equipment sizing by 20%.
- Selected grilles, diffusers, and air outlets based on airflow requirements, enhancing indoor comfort and efficiency.
- Managed firefighting system installation and secured Civil Defense approvals with zero rejections.

SITE MECHANICAL ENGINEER – Sarh United Contracting, Riyadh, KSA.

Oct 2019 – Jun 2022

- Conducted quantity surveying and BOQ verification for firefighting and plumbing systems using contract specifications.
- Oversaw the installation of HDPE underground networks and supervised butt-welding QA/QC inspections.
- Updated technical drawings to reflect site conditions, reducing rework and material waste by 25%.
- Coordinated procurement, ensuring material availability and reducing project delays by 15%.

SITE MECHANICAL ENGINEER – Nahdat Al Emaar, Hail, KSA.

Jul 2019 – Jul 2020

- Managed daily site operations, achieving consistent progress aligned with project timelines.
- Prepared detailed shop drawings for water supply & drainage systems, improving installation accuracy.
- Tracked project budgets and identified cost-saving opportunities that reduced material expenses by 10%.
- Coordinated with engineers and contractors to resolve design conflicts and maintain continuous workflow.

JUNIOR DESIGN ENGINEER – Energy Associates, Lahore, Pakistan.

Jul 2018 – Jul 2019

- Developed shop drawings for fire-fighting and plumbing systems with adherence to NFPA-13 standards.
- Prepared hydraulic calculations, pipe sizing, pump head calculations, and equipment schedules.
- Designed fire alarm and sprinkler systems, improving system efficiency and reducing design errors.
- Supported cross-disciplinary coordination to enhance design accuracy and reduce on-site clashes.

EDUCATION

Bachelor of Mechanical Engineering – Northwestern Polytechnical University – Xi'an, China (2014 – 2018)

KEY PROJECTS

King Khalid International Airport T4 Expansion (Concourse H), Riyadh

Hail University Hospital, University of Hail

Saudi Commission for Health Specialties (SCFHS), Riyadh

King Saud University Projects, Riyadh

ROSHN Head Office, Jeddah

BAE Systems Facilities, Riyadh

Laysan Valley Development, Riyadh

VOV Modern Residences, Riyadh

Shobak & Wookong Restaurant, Al Khobar

Philip Morris International, Sahiwal

Punjab Seed Corporation, Lahore

AFFILIATIONS

Associate Member (AMEI) – Energy Institute (UK)

Associate Member (ACIBSE) – Chartered Institution of Building Services Engineers (UK)

Registered Engineer (SCE) – Saudi Council of Engineers

ACHIEVEMENTS

- Improved project workflow efficiency by 20–30% through systematic MEP coordination.
- Reduced operational energy costs for various clients by up to 18% through optimized audits.
- Achieved zero rejections in multiple Civil Defense inspections for firefighting systems.

PROFESSIONAL ACCOMPLISHMENTS

- Successfully supervised and delivered MEP works for multi-million-dollar commercial projects in KSA.
- Designed mechanical systems that enhanced building performance and reduced lifecycle costs.
- Consistently recognized for accuracy in calculations, technical documentation, and compliance management.

LANGUAGE SKILLS

- **English** (Fluent)
- **Arabic** (Professional Working Proficiency)
- **Chinese** (Fluent)
- **Urdu** (Native)