

Mohamed Fathy Abdalla

Principal Mechanical Engineer / Lead MEP Engineer

CAREER SUMMARY

Professional Engineer having BSc Degree in Mechanical engineering. I have nineteen (19) years of experience in managing, performing, reviewing Mechanical Designs, managing a team of engineers to ensure the successful construction & delivery of various projects. I had been stationed in Saudi Arabia and Egypt working with renowned multinational consultants to accomplish various overseas assignments of multiple industries, including healthcare, airports, commercial, educational, mixed-use, data centers, hospitality and residential of Middle East and Africa region.

EXPERTISE

Design Management

Design Reviews

Site Supervision

Testing & Commissioning

Coordination

Project Management

BMS

Sustainability

Report Writing

Areas of expertise include leading and managing projects. Good hands-on experience in detailed analysis and design using state of the art software. Successful management of project deliverables working in collaboration, design and site issues resolution, resource planning and estimation, and timely delivery of the projects. Liaising with clients, architects, structural, FLS and contractors to ensure well-coordinated, safe builds and renovations. Construction top supervision and site queries responses. Preparation of different technical and management reports, feasibility studies and presentations to clients and other stakeholders.

EXPERIENCE DETAILS

Intercontinental Hotel – Riyadh, Saudi Arabia

MEP Lead Engineer (Feb 2025 to date)

The Life and Safety Upgrade Project for this 275-room luxury hotel, situated within 100 acres landscaped gardens and premium amenities including a golf course, bowling center, tennis and squash courts, indoor and outdoor pools, restaurants, event halls, multi-story parking facilities, warehouses, service buildings and staff accommodation. The scope of this project includes upgrades to the firefighting systems, smoke control, fire alarms, emergency lighting, exit signage and lightning protection systems to ensure compliance with NFPA and Saudi Civil Defense standards.

Major responsibilities include:

- Reviewing and approving MEP submittals, ensuring compliance with luxury hotel standards and energy efficiency.
- Supervising MEP contractors, conducting inspections, and ensuring quality control as per Saudi civil defense standards, international and local codes.
- Managing testing & commissioning of MEP systems.
- Coordinating with architects, interior, structure and hotel operations to minimize disruptions.
- Ensuring HSE compliance and safety protocols during installations.
- Oversaw handover, including as-built drawings, O&M manuals, and staff training



INTERCONTINENTAL


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Riyadh, Saudi Arabia



EDUCATIONAL SUMMARY

BSc in Mechanical Engineering - 2006



SKILL SET

Engineering Codes:

SBC, ASHRAE, NFPA, FGI, IMC, BSI, ASME, IPC, UPC, NPC, BSRIA

Engineering Software:

HAP, IES, Elite software, MS Office, Revit, AutoCAD

Management

Very Good

Communication

Very Good



ASSOCIATIONS

- Member Egyptian Engineering Syndicate
- Member Saudi Council of Engrs.



PERSONAL DETAILS

Marital Status : Married

Nationality : Egyptian

Major responsibilities include:

- Attend the project kick off meeting, gather project information and coordinate with the project manager for the required cost
- Assign mechanical, electrical & PHE leads after coordination with the regional MEP manager in light of the project timeline & resource availabilities
- Preparation of technical bid proposal, feasibility studies, site survey, engineering alternative solutions and design criteria reports.
- Set the weekly time plan per each discipline and share it with lead engineers to allocate the resources accordingly
- Compile all inquiries from leads and categorize them as: Internal inquiries (from Arch, Structure, FLS, etc.), Client inquiries, Authority inquiries. Subsequently, forward each inquiry to the relevant party, along with a specified target response date to ensure adherence to the project timeline.
- Managing MEP design team & monitoring the man-hours for each discipline to assure the working progress is meeting the target dates and interfere for the major technical issues with the design staff.
- Lead MEP team at the weekly internal meeting with other disciplines to evaluate the project progress, coordination and following up all queries.
- Representing Atkins at client meeting to present the MEP work progress, coordinate all requirements, answer client's queries and provide design solutions.
- Following up all correspondence between team members, PM, other disciplines and all stakeholders.
- Arrange internal meetings with the teams to reply, clarify or rectify CRS list.
- Conduct engineering review and coordination of drawings, reports, technical specifications and BOQ to ensure efficiency, economy, and high industry standards while incorporating QA/ QC processes throughout the design
- Leading the MEP team to develop the project from concept level passing to design development ending with tender & construction submission.

Key Projects involves:

a. Design and Engineering Services for Al Wajh Airport (Wajh, KSA)

Role: Lead MEP Engineer

Al Wajh Airport is to be upgraded to accommodate international passengers as well as facilities for guests to interchange with limousines, seaplanes and helicopters. a feasibility study and design for the renovation and expansion of the existing terminal as well as the design of a new terminal building, car parking structure, seaplane facilities, helipad and associated ancillary buildings.

b. Design and Engineering Services for Royal Equestrian & Polo Club (Diriyah, KSA)

Role: Lead MEP Engineer

Project will run on a day-to day basis, in addition to being able to easily host and accommodate any upscale requirements of National and International events. It is consisting of 12 assets including indoor arena, club house, riding school, stable blocks, veterinary clinic staff accommodation & service buildings.

c. Airports Master Plan Development Portfolio (Numerous cities, KSA)

Role: Lead MEP Engineer

Conduct assessment of the existing airport conditions and operations for five airports and provide utilities demand estimation for future expansion phases up to 2050.

d. Design and Engineering Services for Diriyah Gate Najd Residential Districts (Diriyah, KSA)

Role: Mechanical principal engineer

It is a transformative urban development project located in the historic region of Diriyah. This initiative aims to blend modern living with cultural heritage, creating a vibrant community that honors the rich history of the Najd region.

e. Design and Engineering Services for API Twin Towers (Dubai, UAE)

Role: Mechanical principal engineer (Design support at concept stage)

Super tall Twin Tower with 73 and 101 Floors. This development will be a global landmark recognized for its unique offerings Luxury Residential, Retail, F&B, and supporting amenities. Iconic sky lobby Terrace creating a unique tourist attraction.

f. Technical design support & review of various projects such as:

- KAPSARC Collage Building - Riyadh, KSA
- The groove (4 towers with common typical floor podiums) – Abu Dhabi, UAE
- Al Maryah Office Towers - Abu Dhabi, UAE
- Program 3 Al Khobar Entertainment Development (SEVEN) – Al Khobar, KSA

JAR



DAR Engineering (King Fahad Medical City) – Riyadh, Saudi Arabia

PMC Lead Mechanical Engineer / Design Coordinator (Feb 2018 to May 2023)

Program includes construction of five new buildings as following:

- Cancer center & Neuroscience institute towers consist of common tow parking basement ground up to fourth floor and seven typical patient floors with capacity of 700 beds.
- Main laboratories & research center (6 stories building)
- Specialized proton therapy units consist of five treatment gantries.
- New central service building to serve the complex & buffer capacity for the future projects of the medical city.

Major responsibilities include:

- Overseeing the entire buildings mechanical works, ensuring that it involve to the planned scope, budget, client's requirements and timeline.
- Coordinates with other leads to ensure that multi-discipline interfaces are properly addressed with resolution of technical issues and conflicting design requirements in a timely manner.
- Lead team of six engineers & ten inspectors to reviews of Contractors' engineering documents/deliverables within discipline to ensure compliance with the contract requirements, including project procedures, project specifications and applicable codes and standards and monitors status of Contractor documents reviews for discipline
- Represent the mechanical team in weekly coordination & progress meeting with all stakeholders (client, contractor, sub-contractors & vendors)
- Prepare and provide Monthly Progress reports along with trackers to monitor the work progress of the Contractor and provide requested documents from the Client.
- Issue Site Observation & Potential NCR when the contractor did not meet the specification or procedural requirements or violate the compliance of the requirements with Project Technical requirements.
- Validate all team notes of inspection reports, shop drawings, calculations, and all contractors' submittals and make sure that all notes complied with contract, scope of work and specs.
- Applying value engineering to providing necessary functions in a project at the lowest cost.

Key Accomplishments:

- 20% Slashed the energy consumption cost by defining innovative smart solutions i.e. PIBC valves, fan wall AHU, and energy recovery units.
- Achieve negative variation order after value engineering for electrical room air conditioning equipment.
- Successfully achieved the civil defense requirements by designing a complete smoke control system with FA interfacing without affecting the constructed shafts.

DAR Engineering – Riyadh, Saudi Arabia

JAR

Senior Mechanical Engineer (Aug 2011 to Jan 2018)

Major responsibilities include:

- Developing project design from concept, schematic up to detail design and IFC submission including reports, drawing and specifications taking into consideration promoting of sustainability initiatives.
- Coordinate with other disciplines to meet the mechanical engineering design requirements.
- Verify all calculations such as cooling/heating load, static head, pump head and pipe/duct sizing calculations.
- Provides guidance to entry level engineers.
- Performs work in accordance with agreed upon budget and schedule with moderate supervision.

Key Projects involved:

- King Faisal Medical City (1350 beds), Abha, KSA** (One podium and ground plus thirteen floors tower, with different long spans cantilevers up to 11 meter)
- Prince Mohamed Medical City, Al-Jowf, KSA** (Site adaptation of King Faisal Medical City, Abha)

- c. **Veterinary Teaching Hospital, Al-Ahsa, KSA** (Teaching Veterinary Hospital, with total BUA of 12,000 m²)
- d. **Upgradation of District Headquarter Hospital Sialkot** to Allama Iqbal Specialized Hospital Sialkot, Pakistan by Infrastructure Development Authority Punjab, **IDAP** (Lower Ground + Upper Ground + 7 floors)
- e. **150 Bed Hospitals by Ministry of Health in Kayunga and Yumbe, Uganda, Africa** (Ground plus 2 floors with special consideration of safe and economic design as per Euro Codes)
- f. **Specialized Medical Centre (200 beds), Riyadh, KSA** (Five basements and ground plus six floors)
- g. **Ministry of Health, Site Adaptation Projects** (Ministry of Health model designs to be site adopted throughout the Kingdom of Saudi Arabia prototype of 150, 200, 300 & 500 beds)
- h. **Polyclinic, King Abdullah Economic City, Jeddah, KSA** (Single story state of the art polyclinic developed by EMAAR developers.
- i. **Pesticides Lab, Saudi Food and Drug Authority, Riyadh, KSA** (Two story metal building for pesticide lab)
- j. **Regional Laboratories Building & Head Quarter, Saudi Food and Drug Authority, Jeddah, KSA** (Seven story building for various types of laboratories and administration offices)
- k. **Cyclotron and Nuclear Medicine Facilities King Fahd Medical City Riyadh, KSA** (Three basements and ground plus two floors building)
- l. **Mixed Use Twin Tower, Jeddah, KSA** (Two basements and ground plus 25 floors building)
- m. **Cancer, Neuroscience and Laboratories towers King Fahd Medical City (750 beds) Riyadh, KSA**
- n. **Proton Therapy Unit King Fahd Medical City, Riyadh, KSA**
- o. **Riyadh Metro Project (Design review) Riyadh, Saudi Arabia**



Engineering Consultants Group ECG – Cairo, Egypt

Mechanical Design Engineer (Jul 2009 to Jul 2011)

Major responsibilities include:

- Prepare calculations of cooling/heating load, duct static pressure, pump head, pressurization & exhaust/smoke ventilation rates in accordance with country regulations & international codes.
- Space planning for all mechanical rooms, shafts, ducts/pipes routing, maintenance path and provide sketches for design assistants.
- Select mechanical equipment & provide its requirements to engineers for coordination.
- Accomplish the mechanical works survey & prepare Bill of quantity.
- Coordinate with architectural, structural, electrical, and plumbing engineers.

Key Projects involved:

- Cairo International Airport TB2 Cairo, Egypt
- Cairo Seasonal Flights Terminal Building Cairo, Egypt
- Mall of Arabia 6 of October city, Egypt
- Cairo Festival City Mall New Cairo, Egypt
- Faculty of Dentistry Qassim University Al-Qassim, Saudi Arabia
- Horus New Pharmaceutical Plant, Cairo, Egypt

Electro-Mechanical Group EMG – Cairo, Egypt

Mechanical Engineer (Jan 2007 to Jun 2009)

Major responsibilities include:

- Preparing Mechanical design package including Calculations, DWG's & BOQ after coordination with all disciplines for mechanical works requirement.
- Site supervision over equipment and systems installation.

Key Projects involved:

- Orascom Hotel Aqaba, Jordan
- MOVENPICK hotel Aswan, Egypt
- Amon Island resort Aswan, Egypt
- Seifa & Salalah resort Salalah, Oman
- 6 October Club & Stadium Giza, Egypt

Consultants Group CG – Cairo, Egypt

Assistant Mechanical Engineer (Jun 2006 to Dec 2006)

Major responsibilities include:

- Prepare ducts/pipes routing design, Mechanical works survey and inputs for bill of quantity.



TRAINING COURSES ATTENDED

- Advanced Project Management Training for PMP Exam 35 Credit Hours.
- LEED GA Building Design & Construction Training
- Autodesk Revit Training arranged by DAR Engineering, KSA.
- 2023 Code of Conduct Certification by AtkinsRealis, KSA.
- Environmental, Social, and Governance (ESG) Awareness Training by AtkinsRealis, KSA
- Health, Safety and Environment – Orientation by AtkinsRealis, KSA
- What is the Global Design Framework (GDF) by AtkinsRealis, KSA
- Time management and personal productivity by AtkinsRealis, KSA
- Negotiating Skills by AtkinsRealis, KSA
- Climate Change: Background and Impacts on Society by AtkinsRealis, KSA
- Risk Awareness by AtkinsRealis, KSA
- Cyber and Data Security (2023-2024 version) by AtkinsRealis, KSA