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# MOHD NADEEM AKHTAR (PMP)®

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## PROFESSIONAL SUMMARY

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Results-driven **Mechanical Technical BIM Engineer** with 4+ years of comprehensive experience delivering complex MEP projects for **Saudi Aramco, NEOM, and major international clients**. Expert in **BIM implementation (LOD 500), MEP design, and project coordination** with proven track record of optimizing building systems performance. Demonstrated expertise in managing multimillion-riyal projects including **1200-ton chiller systems** and large-scale **VRV/VRF installations**. Skilled in **clash detection, quantity take-offs, and as-built documentation** using industry-leading platforms. Seeking to contribute technical excellence and innovative BIM solutions to a forward-thinking organization in Saudi Arabia's rapidly evolving construction sector

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## WORK EXPERIENCE

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**MECHANICAL Technical BIM ENGINEER**, 07/2023 - current

**Mofarreh Group** - Dammam, Saudi arabia

### As Technical Engineer

- Study the project documents including drawings, specifications, BOQ (Bill of Quantity), RFI (Request for information), correspondence...etc. to take into consideration all the project details during execution
- To supervise drawing development and reviewing of shop drawings (MEP Works).
- Prepare the mobilization plan of the project based on the project requirements.
- Preparation of coordination drawing as per site condition and recommend a solution for Civil, Electrical and telecom services.
- Review the plan and specification and provide the technical solution.
- Raising Technical queries for running projects and Tendering phase projects.
- Preparing Material Takeoff, Quantity Takeoff, and Detail Quote for Material.
- Coordination with Client regarding site technical issues.
- Material Calculation and Price estimation for tender phase project.
- Verifying and approving the material requests and making material specification sheets for vendors.
- Supporting and providing technical support to the site team.
- Coordinated with clients and consultants for BIM deliverables, material approvals, and model updates.
- Attended and contributed to BIM coordination meetings to resolve design issues and align with site conditions.
- Prepared BIM-related documentation including model deliverables, clash reports, and as-built submissions.
- Managed BIM-related documents, RFIs, and submittals through Aconex and Autodesk Construction Cloud (ACC).

### As BIM Engineer

- Conceptual Design.
- Create accurate and detailed 3D models of MEP systems in a BIM environment.
- Integrate MEP models with architectural and structural models to ensure compatibility.

- Developed and managed BIM models for MEP systems up to LOD 500, ensuring accurate as-built documentation.
- Created as-built models (LOD 500) using redlines, RFI responses, site surveys, and point cloud scans from field-verified data.
- Use BIM software to identify and resolve clashes between MEP systems and other building elements.
- Follow MEP industry standards and best practices for coordination, safety, and functionality.
- Create and customize MEP-specific BIM components, families, and templates.
- Generate shop drawings from the 3D MEP model, ensuring accurate dimensions and details for fabrication and installation.
- Collaborate with the BIM Coordinator to ensure clash-free designs and adherence to project requirements.
- Run clash detection reports and provide feedback to resolve conflicts.
- Manage system documentation such as schedules and reports derived from the BIM model.
- Developed clash detection reports with use of Navisworks software.
- Prepare the Assets Register.
- Prepare and maintain the MIDP(Master Information Delivery Plan).
- Prepare the Federated Model.
- Evaluate MEP systems based on performance metrics like energy efficiency and load calculations.
- Review MEP models regularly for accuracy and compliance with project standards.
- Create 2D documentation, including plans, Section, and elevations, based on the BIM model.
- Generate detailed documentation including drawings, schedules, and reports.
- Ensure a smooth handover of the BIM model and documentation to the client or relevant parties.

#### **As Design Engineer**

- Heating/cooling Load Calculation following carrier E-20, ASHARE/ISHARE handbook & software, building survey and preparation of riser diagram for multi-story building.
- Ensure compliance with local, national, and international building codes such as ASHRAE, NEC, IPC, and NFPA.
- Calculation of Duct sizes, design & drafting of all types of VRV/AC and preparation of duct layout with supply and diffusers, duct grilles and slot diffusers with flexible connections for multi-store buildings.
- Pipe sizing for chiller complete valve and fitting, pipe size calculation for chilled water circuit to AHU cooling Tower, calculation of pipe dia. By considering friction, pipe sizing for VRV,VRF.
- Selection of Chillers, pipe sizing calculation cooling tower pump with pump head calculation.
- Selection of HVAC Equipment's such as Chillers, Air Handling Units, Chiller Pump, Fire Water Pump, DX System units such as Package Air conditioning Units (PACUs) and Fan Coil Unit along with Condensing units.
- Selection of indoor & outdoor units according to calculated CFM and TR.
- Design potable water distribution systems, including pipes, pumps, valves, and storage tanks.
- Design sanitary drainage and venting systems to ensure the safe removal of wastewater.
- Design of pump tank capacities as per project specification & site requirement.
- Pump room and pipeline design as per project specification.

#### **HVAC DESIGN ENGINEER (Part-Time), 05/2022 - 06/2023**

##### **AirWaves Engineers pvt. ltd. India - Pritampura (New Delhi), India**

- Designing & drafting of HVAC System.
- Lead the design and engineering of HVAC systems for diverse projects, including commercial complexes, hospitals, and residential buildings.

- Perform detailed load calculations using software such as Carrier HAP and E-20 Excel sheet to determine appropriate system capacities.
- Conduct heating and cooling load calculations to determine the appropriate size and capacity of HVAC systems.
- Design duct and piping layouts, ensuring optimal airflow, ventilation, and energy efficiency.
- Select and specify HVAC equipment, including VRV, VRF, Chillers, based on project requirements, specification and performance criteria.
- Collaborate with architects, electrical engineers, and contractors to ensure seamless integration of HVAC systems into building designs.
- Designed and modeled HVAC systems using Revit and AutoCAD, ensuring accurate coordination with other building systems.
- Work closely with construction teams and contractors, ensuring proper installation and calibration of HVAC systems.
- Supporting and providing technical support to the site team.
- Supporting site quality team for approval and documentation-related issues.
- Estimations preparation of BOQ.
- Coordination with the site team for work progress as per the construction schedule.

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## CERTIFICATES

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- HVAC Design & Drafting  
Comfort Design, India (01 March 2020 to 30 May 2020)  
Student ID: B044-202003-817
- Cooling Tower Design & Selection (Webinar)  
Conducted By Comfort Design, India (11 July 2021)
- HAP-5.1 (Webinar)  
Conducted By Comfort Design, India (19 March 2023)  
Reg ID: CD/WB/HL/23/04/0156
- AutoCad 2D & 3D  
ATIVS(Asian Technical Institute for Vocational Studies) May 2018
- Indian Railway ( Gorakhpur Uttar Pradesh)  
Indian Railway (Nov 2019 to Feb 2020)

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## SKILLS

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|---|---|
| • Quick Learner                               | • Duct Sizer                              |
| • AutoCAD (2d&3d)                             | • Pipe Sizer                              |
| • Autodesk Civil 3D                           | • HVAC Design                             |
| • Revit                                       | • Air Cooled & Water Cooled System Design |
| • Dynamo for Revit (Automation & Scripting)   | • Plumbing Design                         |
| • Collaboration & Coordination (BIM 360, CDE) | • Utility Water Supply & Drainage         |
| • NavisWorks                                  | • Infrastructure                          |
| • HAP (Hourly Analysis Program)               | • MS Office                               |
| • Heat Load Calculation in Excel Format       | • MEP coordination                        |

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## EDUCATION

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**Bachelor of Mechanical Engineering:** Mechanical Engineering, 06/2020 - 05/2023  
**MANSAROVAR GLOBAL UNIVERSITY** - India  
 GPA: First Class

**Diploma:** Mechanical Engineering, 04/2017 - 05/2020

**AL-FALAH UNIVERSITY** - India

GPA: First Class

**High School Diploma,** 03/2017

**BOARD OF HIGH SCHOOL AND INTERMEDIATE EDUCATION U.P** - India

• S.S.M SCHOOL

• GPA: First Class

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### PERSONAL DETAILS

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**Date of Birth / Age:** 20/12/2000

**Nationality:** INDIA

**Marital status:** Single

**Visa status:** Employment

**Gender:** Male

**Religion:** Muslim

**Passport:** V0486906

**Other:** Driving License Saudi (Valid)

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### LANGUAGES

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**English:**

**Hindi:**

**Urdu:**

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### KEY PROJECT HANDLE

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Construction of Staff Village Primary Infrastructure (Amaala, Neom) Saudi Arabia (Complete MEP infrastructure & BIM modeling).

Riyas NGL Temporary Construction Facilities Saudi Arabia. (Aramco Project).

Offshore Gas Increment Program (Fadhili Gas Plant Expansion, Aramco Project).

Riyas TCF Mobilization Aramco Project :-

1. SAPMT Office Building.
2. Accommodation Grade 15-16.
3. Executive Dewaniyah.
4. Executive Recreation Building.
5. Squash Court.
6. Maintenance Shop.
7. Gathering Tent.
8. Electrical Room.
9. STP Blower Room etc.

Govt. Medical College Koriyawas, Haryana VRV&VRF System (800Ton)India.

Shivaji College, New Delhi VRV & VRF System (350Ton) India.

IIT Kanpur, Uttar Pradesh Water Colled Chiller (1200Ton) India.

DTU, New Delhi Water Cooled Chiller (800Ton) India.

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### BIM STANDARD & PROTOCOLS

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- BS EN ISO 19650-1:2018
- BS EN ISO 19650-2:2018
- BS EN ISO 19650-3:2020
- BS EN ISO 19650-4:2022
- BS EN ISO 19650-5:2020

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### DECLARATION

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I hereby declare that the information provided above is true and correct to the best of my knowledge and belief.

**Date:** \_\_\_\_\_  
Arabia

| **Place:** Al-Khobar, Saudi

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**(Mohd Nadeem Akhtar)**