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| **Farhan Ghous CEng MIMechE**  Senior/Principal Mechanical Design Engineer | [fghous21@hotmail.com](mailto:fghous21@hotmail.com) • 0-746-0871-334  • Manchester, UK |

Competent Chartered Mechanical Engineer with over 8 years of comprehensive experience and primary focus in mechanical design and product management. Solid track record of designing building services, HVAC and Fire protection related products to ensure achievement of exceptional results. Proven success in overseeing project management within set timelines along with driving multiple cost reductions. Adept at reinforcing professional conduct within the organisation and efficiently directing diverse teams to ensure completion of tasks in adherence with engineering goals and objectives.

Areas of Expertise

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| * Mechanical Design * HVAC/MEP Design * Sheet Metal Design * Geometric Dimensioning * Fire Sprinkler design | * Drawing & Modelling * FEA & Failure Analysis * Risk assessments & FMEA * Pressure Equipment design * FM & LPCB approvals | * Pressure Vessel Design * Manufacturing Process Controls * Building services products * Fire pump design * Electro-Mechanical Design |

Professional Experience

Armstrong Fluid Technology, Manchester, UK April 2021 – Present

**Senior Mechanical Design Engineer (HVAC/FIRE)**

Taken on additional responsibility at Armstrong to manage both Fire and HVAC Engineering projects.

Designing and testing new FM approved Fire pump sets.

Created and modified BOMs and Routings of the existing Fire sets on the new ERP systems.

Managing a team of design engineers and draftsmen to design new FM and LPCB approved fire sets.

Armstrong Fluid Technology, Manchester, UK Aug 2017 – Present

**Mechanical Design Engineer**

Designed several pumping related products such as multi-pump boosters, pressurisation units and highly efficient next generation centrifugal pumps that involved computation fluid dynamics (CFD) and finite element analysis (FEA).

Head implementation of design improvements of centrifugal pump components.

Carry out basic load calculations related to HVAC and Building services related products.

Create and generate project-related computations, models, details to ensure quality control and technological precision. Deliver vigorous engineering recommendations, including concept design and drawings, prototype design and testing, BOM structures, GA drawings, and PDF construction.

Conduct technical information analysis for fundamental and brand-new products. Support client requirements regarding alterations by co-operating with manufacturing and QA. Supervise maintenance of present engineering database and BOMs, while conducting WRAS approval processes for several products.

* Carried out over 20% of cost reductions on design improvements.
* Oversaw development and supervision of two key product projects: next generation pressurization unit and multi-pump booster as well as re-structured existing products and component parts.
* Headed execution of ISO9001 and 14001 standards by providing support to department and company to demonstrate continuous customer service improvements.
* Ensured facilitation of exceptional customer services by collaborating with members of other departments and managing rapid and appropriate responses.

**CST, Alfreton, Derbyshire Aug 2016 – Aug 2017**

**Senior Mechanical Design Engineer**

Carried out designs of Fire Sprinkler tanks and large steel bolted storage tanks for industrial applications along with complex Finite element analysis (FEA) and failure analysis to optimize the designs.

Managed a team of Design engineers and draughtsmen to complete several sheet metal design projects within set deadlines along with driving cost reductions.

Gained invaluable experience on sheet metal design, fabrication and weldments. Worked with the team to create special programs for CNC machines.

Authorised design modifications and supplier approvals, while visiting client sites.

* Participated in presentation of new products at all design stages, including construction, requirements specification, concepts, complete design, and production optimisation.
* Created complex 2D and 3D drawings/models by utilising AutoCAD and SolidWorks, while overseeing management of CAD/CAE systems.
* Spearheaded implementation of design change request, including drawing and BOM changes.

**CST, Alfreton, Derbyshire Aug 2014 – Aug 2016**

**Mechanical Design Engineer**

Designed Fire Sprinkler tanks and large steel bolted storage tanks for industrial applications.

Completed number of major projects in short time span and organised bills of materials, modification instructions, and schedules to support procurement, manufacture, installation, testing, and approval of design.

* Structured whole new drawing library for all tank components and led creation of tank shell design, roof design, general arrangement, and fabrication drawings using AutoCAD Inventor and SolidWorks for galvanized, glass, and epoxy coated tanks.
* Designed BS 4211 standard ladders, platforms for over 30 different tanks, and standard ball valve housing with the approval of Water Regulations Advisory Scheme (WRAS).
* Optimised quality standards and technical accuracy by developing and producing project-related calculations, designs, and documentations.

Other Experience

**Mechanical Engineer trainee,** PEL, Lahore Jun 2012 – Jun 2013

Mechanical Engineer Intern, Kohinoor Energy Ltd, Lahore Apr 2012 – Jul 2012

Mechanical Engineer Intern, SEPCOL, Lahore Apr 2011 – Jul 2011

Education & Credentials

**Master of Science in Mechanical Engineering – Advanced (2016-17)**

*Accredited by IMechE*

University of Nottingham, Nottingham, UK

***Key Modules:*** *Advanced Technology, Review Material Models and Modes of Failure, Advanced Dynamics of Machines, Integrated System Analysis, Finite Element Analysis, Additive Manufacturing and 3D Printing, Fibre Reinforced Composites, Turbulence and Turbulent Flows, Introduction to Aerospace Technology, Integrated System Analysis, Advanced Thermal Power Systems, and Internal Combustion Engines*

***Postgraduate Project:*** *Finite element analysis (FEA) for Fretting Fatigue life of Aero-Engine Materials using Abaqus, a software for FEA & CAE.*

**Bachelor of Science in Mechanical Engineering (2009-13)**

*(GPA: 3.66/4.0)*

University of Engineering and Technology, Lahore, Pakistan

***Key Modules****: Machine Design, Renewable Energy Resources, HVAC Systems, Engineering mechanics, Mechanics of Materials, Mechanics of Machines, Industrial Materials, Fluid Mechanics, Thermodynamics, and Finite Element Methods.*

***Final Project:*** *Led the final year project team to design an Automated foaming jig for commercial refrigerator cabinet for PEL* (Pakistan Electron Limited, Pakistan's top Appliance Manufacturer)

Technical Proficiencies

AutoCAD 2D and 3D | Pro/E | Inventor | SolidWorks | Ansys & Abaqus (FEA) | MATLAB And C++ Programming | Microsoft Office | Simulink | Baan & LN (ERP Systems) | Microsoft Project | Revit

Affiliations

* Chartered Engineer and Member of Institute of Mechanical Engineers – CEng MIMechE
* Member of Engineering Council
* Certified Project Manager by Association for Project Management – PMQ APM