Pathik Dineshbhai Patel

Mechanical Engineer

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Personal Statement

As a Mechanical Engineer with a 2015 degree, I have continually enhanced my design skills and proven my adaptability. My strong communication abilities allow me to foster collaboration, articulate ideas effectively, and assist in implementing new methods. Skilled in 3D CAD modeling and analysis, I consistently exceed design expectations and successfully manage projects from start to finish. Managed and coordinated fundraising events to support team projects, contributing to the successful procurement of crucial mechanical equipment.

Core Qualification

- Mechanical Engineering Packages: AutoCAD, Creo, SolidWorks, Fusion 360, Ansys Workbench/Fluent)
- Proficient with CAD Software such as AutoCAD, PTC Creo Parametric, SolidWorks
- SolidEdge, NX CAD/CAM, Catia V5
- Ansys: Post Processing in Fluent, Simulation
- Ansys Workbench: Stress analysis, thermal analysis, and fluid dynamics, Topology Optimization, Lattice
- ISO 9001, Industry Standard
- Design for Manufacturing (DFM)
- Geometric Dimensioning & Tolerancing (GD&T)
- 3D Engineering, 3D CAD: Designing, modifying 3D CAD data using PrusaSlicer
- MS Office: MS Excel, Powerpoint
- Product Data Management
- Generative Design using Creo
- SAP,ERP, ASANA and SYSPRO Software
- R & D

Work Experience

Gedore Torque Limited, Bramley, Guildford **Aug 2024 – Present**
Role: Mechanical Engineer

Responsibilities:

- Design & Developed jigs and fixtures for torque tools and transducers, improving assembly precision and calibration accuracy
- Conducted regular preventive maintenance and implemented Total Productive Maintenance (TPM) strategies to reduce downtime and enhance equipment reliability
- Managed the service and repair of torque tools and transducers for clients across UK and globally, ensuring consistent product quality and customer satisfaction.
- Produced detailed technical reports and maintained thorough documentation for calibration, maintenance, and design updates, ensuring compliance with internal and external audits
- Managed both in-house and UKAS calibration processes, adhering to ISO/IEC 17025 standards and maintaining strict quality control across all tools and transducers
- Implemented lean manufacturing techniques to reduce waste and increase the efficiency of calibration and production processes
- Apply in-depth knowledge of mechanical systems to troubleshoot and resolve complex issues with torque tools, transducers, and calibration equipment

Gedore Torque Limited, Bramley, Guildford **July 2023 – July 2024**
Role: Mechanical Technician

Responsibilities:

- Assemble and calibrate precision components for electric tooling production, adhering to quality standards
- Consistently demonstrated ability to work to tight deadlines while maintaining high quality of mechanical repairs and installations

- Using knowledge of Technical Drawings to assist in the improvement of machine designs and assembly procedures
- Utilise various tools and technology to perform testing and troubleshooting of equipment, improving efficiency
- Accustom to Prepare Technical Reports to record all technical data and findings during machine inspections and repairs
- Skill in routine maintenance checks on Mechanical Components, leading to reduced downtime and increased efficiency

Kabra Extrusion Technik ltd., Daman, India **June 2017 – Sept. 2019**
Role: Mechanical Design Engineer

Responsibilities:

- Product Design for a Plastic Extrusion machines Die Components
- Bill of Materials (BOM), Geometric Dimensioning & Tolerancing (GD&T), Design for Manufacturing (DFM)
- Responsible for designing machine components as per customer requirements
- Design and development of new products, incorporating specific product requirements to guarantee efficiency and effectiveness
- Apply Mechanical Engineering Principles in the Design and assembly of complex extrusion equipment
- Preparing the Drawing of the tool for production as per ISO 9001
- Using Conduct Research expertise to develop new troubleshooting techniques for complex mechanical systems
- Expertise in 3D Models, Assembly, Drawing and Detailing using CAD Packages
- CNC Programming (Manufacturing Processes: Such as: Profile cutting, Profile Milling from drawing)
- Prototype Tooling Costing and Estimation

Kabra Extrusion Technik ltd., Daman, India **Apr. 2016 – Apr. 2017**
Role: Draughts person

Education and Qualifications

Master of Science in Mechanical Engineering *(Distinction)* **Sept. 2021 – Sept. 2022**
De Montfort University, Leicester

International Incorporated Master's Engineering (2:1) **Nov. 2020 – Jun. 2021**
De Montfort University, Leicester

Bachelors in Mechanical Engineering (First Class Equivalent) **Aug. 2011 – May. 2015**
Gujarat Technological University, Gujarat, India

A Level Equivalent: HSC **July 2009 – Mar. 2011**
D.C.O.Sarvjanik High School – Gujarat, India
Subjects: English, Mathematics, Chemistry, Physics, Computer

GCSE Equivalent: SSC **July 2008 – Mar. 2009**
D.C.O.Sarvjanik High School – Gujarat, India
Subjects: English, Mathematics, Sanskrit, Social science, Science & Technology, Gujarati, Computer

Project

- **"FABRICATION OF AUTOMATIC ELECTROHYDRAULIC JACK"** **(B.E- Mechanical, GTU)**

Detail: - In Project, modified to lift the trailer in three-axis with using a single hydraulic jack instead of three hydraulic jacks.

- **“STRATEGIES FOR LIGHTWEIGHT DESIGN: COMPARISON OF TOPOLOGY OPTIMIZATION, LATTICE STRUCTURE AND GENERATIVE DESIGN” (M.Sc. Mechanical, DMU)**

Detail: - In Project, a 3D design of a bell crank lever has been made along with optimization and simulation have been done using Ansys, Creo, SolidWorks, and Fusion 360. In Creo, Invented ten different generative designs with the same weight, as well as one lattice structure design. In SolidWorks and Fusion 360, topology optimization has been done. Moreover, in Ansys, three topology optimization processes have been done with different masses, inclusive of one lattice density optimization. Eventually, Compared three strategies: topology optimization, lattice structure, and generative design. As a consequence, the final designs for 3D models have been printed using the Prusa Slicer.

Awards

- Gold Medal in (PROJECT FESTIVAL) TECH EXPO-2015

Key Skills

- Attention to Detail
- Quick Thinker
- Innovative
- Team Work
- Verbal and Written Communication Skills
- Analytical

Volunteer

- Shiv Katha Giri bapu March 2021- Present

Extra-Curricular and activity

- Participated in Projections-13 “Aero Modeling Workshop”
- Participated in Lecture Series of the Professors of University of Applied Sciences, Bielefeld, Germany

Certificates

- AutoCAD
- Creo
- Ansys
- Metal Cutting Application

Hobbies

- Playing Cricket
- Learning New Technologies
- Swimming
- Sports
- Socializing
- Travel