

Rut Trambadiya

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Summary

Dedicated and detail-oriented Mechanical Design Engineer with 3 year+ expertise in CAD software, FEA analysis, and product development, leveraging advanced CAD tools and engineering principles. Seeking to contribute to a forward-thinking organization by optimizing design processes, enhancing product performance, and driving cost-effective solutions to meet company goals and client needs.

Skills

Software

Solidworks, AutoCAD, Creo Parametric, Simens NX, CATIA, M.S. Office

Manufacturing

Production Machinery, Material Handling, Quality Management

Precision Measuring Tools

Vernier Calipers, Micrometer, Height, Bore and Thread Guage

Soft Skills

Teamwork, Critical Thinking, Flexibility, Effective Communication, Multitasking, Time Management, Decision-making

Work experience

Karadani Engineering Pvt. Ltd. | Ahmedabad, India

Jan 2023 - Aug - 2023

Mechanical Design Engineer

- Spearheaded the design and development of over 150 mechanical components and systems, including steel storage tanks, pressure vessels, autoclaves, racks, and trolleys, ensuring high-performance and cost-effective solutions across manufacturing sectors.
- Utilized SolidWorks, AutoCAD, Siemens NX, and CATIA to produce accurate 3D structural models and 2D fabrication drawings, including weld details, joint connections, and layouts in compliance with ISO, ANSI, and ASME standards.
- Delivered complete drawing packages with Bills of Materials (BOMs), DXF files, and material takeoffs for fabrication, supporting both CNC machining and manual production processes.
- Scheduled work orders, monitored production timelines, and performed final product inspections to ensure all deliverables met quality benchmarks and customer requirements.
- Performed detailed Finite Element Analysis (FEA) and Computational Fluid Dynamics (CFD) simulations to validate mechanical performance, contributing to a 20% reduction in failure rates.
- Collaborated cross-functionally with Electrical, Manufacturing, Quality Control, and Project Management teams to ensure design alignment and successful project execution.
- Participated in site visits and prototype evaluations to assess fit, function, and feasibility, implementing design changes based on real-world conditions and client feedback.
- Regularly updated and revised engineering drawings and documentation, maintaining clear version control and ensuring regulatory compliance.
- Played an active role in improving internal design libraries, standardizing drafting practices, and promoting Design for Manufacturing (DFM) principles across teams.
- Improved delivery timelines by 15% through workflow optimizations and enhanced communication with stakeholders.

Karadani Engineering Pvt. Ltd. | Ahmedabad, India

Apr 2022 - Jan 2023

Assistant Design Engineer

- Collaborated with senior mechanical engineers to develop 2D and 3D CAD models using SolidWorks and AutoCAD for mechanical components and assemblies.
- Conducted design revisions and modifications based on client feedback, manufacturing requirements, and engineering analysis.
- Prepared and maintained detailed technical drawings, bill of materials (BOM), and documentation for project submissions.
- Assisted in performing basic calculations for stress, load, and tolerance to ensure design integrity and functionality.
- Supported prototyping and testing processes by coordinating with the fabrication team and suppliers.

- Participated in design reviews and helped ensure compliance with industry standards and company specifications.
- Managed file versions and drawing releases using PDM systems to streamline workflow and reduce errors.

Karadani Engineering Pvt. Ltd. | Ahmedabad, India

Jan 2022 - Mar 2022

Design Engineer Intern

- Used 3D modeling software(i.e. Solidworks, CATIA, NX and AutoCAD) to design products that met desired features and requirements based on clients.
- Created detailed technical documents to support product design, development, and testing.
- Performed design reviews to identify potential issues before production began.
- Prepared 40+reports and delivered 6 presentations to communicate engineering results or recommendations.
- Created checklists for review or inspection of 5 completed projects.

Karadani Engineering Pvt. Ltd. | Ahmedabad, India

Jan 2021 - Dec 2021

Design Engineer Co-op

- Supported 3+ senior engineers in mechanical design and product development.
- Assisted in creating detailed CAD designs for 30+ mechanical components.
- Participated in brainstorming sessions to come up with 3+innovative design solutions.
- Supported the prototyping process, including assembly and testing.
- Conducted 4+design reviews and incorporated feedback to improve designs.

Education

Carleton University, Canada.

Sept 2023 - Dec 2024

Master of Mechanical Engineering

Gujarat Technological University, India.

June 2018 - Apr 2022

Bachelor of Mechatronics Engineering

Languages

- English
- Hindi
- Gujarati

Certifications

Solidworks CAD Design Professional
C-HR8QL54JUK

Solidwaorks CAD Design Associates
C-C38JWMRT7A

Note:

1. References are available upon request.
2. My design portfolio can be accessed via the link located directly below my email address.