YASHKUMAR RATHOD

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HIGHLIGHTS

- Results-driven Mechanical Design Engineer with **2 years** of experience in the **design and development** of complex mechanical systems and components.
- Skilled in 2D and 3D modelling CAD software, engineering principles.
- Proven track record of successfully bringing products from concept to production.
- Expertise in pharmaceutical equipment design, skilled in 3D Printing and a constant desire to learn and grow.

SKILLS

CAD Packages	**SolidWorks (CSWP)**, **AutoCAD**/DraftSight, **MasterCAM**, Siemens NX, SolidEdge.
3D Modelling & Simulation	FEA analysis using SolidWorks and **Ansys Simulation**, General Arrangement Drawing (**GA Drawing**) and Pneumatic and Instrumentation Drawing (**P&ID**), Experience with design for manufacturing and assembly (**DFMA**) principles & **GD&T**.
Other	MS Office, **QGIS**, Bluebeam, Knowledge of CE, ASME, ISO standards.
Soft Skills	Multitasking, Organized, Excellent communication skills, Teamwork, **Avid Learner**, Analytical and problem-solving ability, **High attention to details**.
Programming Languages	Python, C++, SQL, Arduino IDE

WORK EXPERIENCE

Jr. Process Engineer

PowerCor Manufacturing, Linamar Oct 2023 - Current

- Develop Process Flows by conducting time studies and track cycle time to improve efficiencies and reduce manufacturing cost per piece.
- Performing various process engineering activities such as continuous improvement suggestions, process developments, capability study, cost control and profitability coordinating with other engineers, production team.
- Work with production planning to set shop priorities and ensure all required tools and documentation required in the plant for production.
- Identified the bottleneck in the manufacturing line by performing 8D analysis and implemented CAR (Corrective Actions) to enhance production with a low scrap rate.
- Improved design of Fixtures, tools, and tool holders in Solid works 3D.
- Doing the reverse engineering if needed. (Making drawings in SolidWorks from parts)
- Optimized tooling cost and tool life by performing different tool tests and analyzing the test results.
- Arrange Material Review Board (MRB) meetings and targeted Highest scarp areas for scrap reduction, improve First Time Quality, and Cut Cost of Poor Quality (COPQ).
- Participate in PFMEA review meetings and make changes in RPN numbers according scrap report.
- Update and maintain process documents according to engineering change requests (ECR).
- Great adaptiveness of automotive manufacturing processes quality standards ISO9001, IATF 16949
- Performing Weekly SR&ED (Scientific Research and Experimental Development) claims for the organization.
- Conducting the CTM (Core Team Meeting) and presenting monthly production data in CFM (Customer Focus Meeting)

RESEARCHER – MECHANICAL DESIGN

WIMTACH, Centennial College MAY 2022 – May 2023

- Designed and drafted a **complete production line** for a project that involved converting a manual process of shea butter cosmetic products into an automated one, resulting in increased efficiency, quality and profitability.
- **Initiated** and **implemented** a simple design change in product pipeline system resulting in similar cost but proving future expansion prospect and modularity.
- Accountable for the implementation and verification of **GD&T regulations** with drawings and updating in PLM software - Siemens Teamcenter.
- Maintained **cross-functional communication** and collaboration with Mechanical and electrical engineering during the design process with the use of Bluebeam Revu and communication tools like Slack and MS Teams.

- **Reduced the dimension** of the prototype case for the PCB **by 27%** by restructuring the components, which decreased the width of the casing by half and increased safety while operating.
- Executed the assigned design responsibilities by the timely release of drawings by working closely with the Project Leader that **reduced** the project task time **by 6 Weeks**.
- Exceeded the requirements of e-textiles by testing the integrity and durability of various off the shelf e-textiles.
- **Researched and quality tested 82 e-textiles** with **13 data points** using instruments – Oscilloscopes and Meggers.
- Generated reports and excel sheets from research to quantify and measure the discoveries.

JR. DESIGN ENGINEER

Bectochem Lödige Pvt. Ltd., India. Sep 2019 – August 2020

- Designed and drafted pharmaceutical machines and equipment with **cGMP Standards** compliance using various CAD software platforms such as SolidWorks, AutoCAD, SolidEdge, and DraftSight.
- Created General Arrangement, Process Flow Diagrams (PFD's) and P&IDs of various pharmaceutical equipment compliant with cGMP Standard for client review and approval.
- Designed and drafted detailed drawings, weldments, and assembly drawings for manufacturing according to BIS and ASME specifications and collaborated with different departments to meet design standards.
- Generated and maintained **engineering documentation** such as Assembly Instructions, Bill of Material, Inspection Reports and Machine's Blueprint by utilizing **ERP software - SAP**.
- Performed engineering calculations and equipment selection based on the size and budget according to the project requirements.
- Produced plant layouts in AutoCAD which included machines, auxiliary components, piping and other accessories according to best industry standards and the designed process flow.
- **Produced** standard manufacturing drawings of high-demand equipment, **reducing work hours by 12%.**

EDUCATION

MECHANICAL ENGINEERING TECHNOLOGY - INDUSTRIAL 2021 – 2023

Centennial College, Toronto

BACHELOR OF ENGINEERING (MECHANICAL ENGINEERING) 2015 - 2019

Gujarat Technological University, India

CERTIFICATIONS & TRAINING

CERTIFICATIONS

- CSWP - Certified SolidWorks Professional | Sheet Metal | Weldments - Dassault Systèmes
- A Hands-on Introduction to Engineering Simulations – Cornell University
- QGIS - LinkedIn Learning
- Introduction to Programming using Python (Automate the Boring Stuff with Python) - Udemy
- The Fundamentals of Digital Marketing - Google Digital Unlocked.
- Working at Heights, Confined Space, WHMIS, MOM in 5 Steps.

INDUSTRIAL TRAINING at NTPC Jhanor Gandhar Gas Power Project, India.

- Completed 15 days of industrial training in gas-powered power plant operations and functions.
- Developed comprehensive knowledge of techniques to enhance efficiency and minimize maintenance time.
- Hands-on experience with control unit, DM water unit, switchyard, cooling tower, and gas/steam turbine.

ACADEMIC PROJECTS

MILLING FIXTURE 3rd Semester @ Centennial College

- Acquired skills in 3D modeling and design using Solidworks, including creating detailed technical drawings and assembly instructions.
- Improved ability to work in a team environment by collaborating with classmates and professor to develop a functional and safe design.
- Developed ability to solve problems and troubleshoot issues that arise during the manufacturing process.
- Learned the importance of following safety regulations and industry standards in the design and production of tools and fixtures.

SANDWICH DRILL JIG 3rd Semester @ Centennial College

- Developed ability to solve problems and troubleshoot issues that arise during the manufacturing of the jig.
- Design and development of a sandwich drill jig for precise and efficient drilling of multiple layers of materials.
- Hands-on experience in tool design principles and application in the development of a specialized drill jig.
- Proficiency in computer-aided design and engineering software such as SolidWorks for 3D modeling, simulation, and technical drawings.

RECYCLING OF PLASTICS USING AFFORDABLE INJECTION MOULDING MACHINE 4TH Year Project in Bachelor's Degree

- Served as team lead of five-member team, gaining experience in team management and leadership.
- Designed and rendered animated model of concept machine using SolidWorks.
- Utilized scrapyard parts to reduce budget and create eco-friendly product.
- Developed detailed drawings and collaborated with local ironsmith to build the machine.

REMOTE ACCESSED IRRIGATION SYSTEM 3rd Year Project in Bachelor's Degree

- Served as team leader and managed a team of four members, assigning roles and responsibilities as needed.
- Developed and coded a feedback-loop program for controlling pump operation using Arduino IDE.
- Utilized soil moisture sensor to switch relays for optimal pump operation.
- Created a presentation using Microsoft PowerPoint and presented to the Head of the Mechanical Department.