Siddhesh Shailesh Rajput

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SKILLS

- **Software**: SolidWorks, Creo Parametric (Pro/Engineer), AutoCAD, CATIA V5, ANSYS, ABAQUS, Quindos, RAM Elements, RAM Connections
- **Computer skills**: MATLAB, Microsoft Office (Excel, Word, PowerPoint, Project, Outlook)
- **Fabricating skills**: CNC Machining (G&M codes programming), Welding, Cutting, Grinding, Drilling and Milling
- **Lean Six Sigma tools:** DFMEA, Root Cause Analysis, 5S, Control Charts, VOC, Hypothesis Testing, Value Stream Mapping

PROFESSIONAL EXPERIENCE

Mechanical Engineer: Pneu-Mech Systems Mfg. Inc., Statesville, NC **July 2019-Present**

- Identified and effectively solved a major design bottleneck generating a $20k loss in every project using DMAIC principle.
- Headed engineering calculations to design motors, burners, pumps, centrifugal fans and ductwork and developed new product prototype to meet customer requirements and specifications, and in accordance with ASHRAE standards and NFPA codes.
- Implemented and standardized new Request for Quotation Form using 5S to aid Purchasing Manager and reduce lead time by 20 mins. Assisted the Director of Engineering in modifying project charter in the transmittal meetings.
- Collaborated with sales, manufacturing and installation team to Design to Cost, Design for Manufacturability and Design for Assembly. Drafted and generated bills of material and 2D drawings for parts and assemblies on AutoCAD and SolidWorks.

ACADEMIC PROJECTS

Vision Inspection System: Graduate Design Project, Schaeffler Group USA **August 2018 – May 2019**

- Designed CAD models of various components of the electro-mechanical sub-system using Creo Parametric (Pro/Engineer) to incorporate within the assembly. Prepared 2D and 3D drawings using geometric dimensioning and tolerancing (GD&T).
- Designed and selected stepper motors and linear motion drive according to force/torque calculations for optimum results.
- Chose quality material to reduce cost by 60%. Performed manual stress/strain calculations on the parts and finite element analysis on CAD models on ABAQUS to evaluate von Mises Stress and deformation under static and dynamic load.
- Generated purchasing orders and bill of materials for the electro-mechanical sub-system. Handled 3D printing operation.

Wire Drawing Simulation for Advanced High Strength Steels: **December 2018**
Advanced Manufacturing Processes and Equipment Project, UNC Charlotte

- Simulated the wire drawing process including friction for DP 350/600 AHSS on MATLAB using a developed code.
- Performed data analysis and extrapolated the data points for input parameters to calculate and plot the drawing stress and die press against the drawing distance. Calculated the maximum friction value before the drawing operation fails.

LEADERSHIP AND CAMPUS EXPERIENCE

Suspension Department Head, Team DJS Kronos India, BAJA STUDENT INDIA **March 2015-February 2016**

- Led the sub-team of 7 students out of the team of 30 for the continuous improvement of design for manufacturability, cost and weight of the components. Reduced the overall weight of the system by 40 lbs. and conducted manual testing of the parts.
- Designed and modeled steering upright and double wishbone suspension system to improve machinability on SolidWorks. Performed static analysis and dynamic analysis to improve life cycle and reduced stress by 20 % on ANSYS Workbench.
- Generated bill of materials (BOM) and design failure mode and effect analysis (DFMEA) report. Communicated within the sub-team to achieve the goal in time as per scheduled project plan. Collaborated with other sub-teams to design for assembly.
- Team secured **8th** position overall and **1st** in Maneuverability event in BAJA STUDENT INDIA 2016.

Member, Team DJS Kronos India, BAJA STUDENT INDIA **March 2014- February 2016**

- Performed design calculations of spring, modeled spring-mass-damper system and selected optimum shock absorber.
- Designed and fabricated double wishbone suspension on SolidWorks. Drafted 3D & 2D CAD into drawings using geometric dimensioning and tolerancing (GD&T) and generated Design Verification Plan and Report.

EDUCATION

Master of Science in Mechanical Engineering (GPA: 3.8/4.0) **May 2019**
The University of North Carolina at Charlotte, Charlotte, NC

Bachelor of Engineering in Mechanical Engineering (GPA: 3.3/4.0) **May 2017**
University of Mumbai, Mumbai, India

Relevant Coursework: Project Management, Finite Element Analysis, Mechatronics, Machine Design, Advanced Manufacturing Processes and Equipment, Gear Manufacturing and Metrology, Machine Tool Metrology, Material Technology, Heat Transfer

CERTIFICATIONS

- **Lean Six Sigma Green Belt**: Six Sigma Global Institute **May 2019**
- **CATIA V5 with GD&T**: CADD Centre Training Service, Mumbai, India **May 2017**
- **SolidWorks with GD&T**: CADD Centre Training Service, Mumbai, India **August 2015**