MECHANICAL TEST ENGINEER

Summary

To acquire a full time position in the field of mechanical engineering, demonstrate technical analysis skill while completing challenging project in a dynamic work environment.

Education

B.S. : Mechanical Engineering , 2014 The Ohio State University ï¼ City , State , USA

Certifications

- Engineer in Training (EIT): Passed the Fundamentals of Engineering exam (May 2015)

Experience

Mechanical Test Engineer

May 2014 to Current Raytheon Technologies Corp ï¼ Saint Petersburg , FL

- Performed hundreds test on Honda vehicle components (Acura TL, MDX, Accord, Odyssey, Civic)
- Design, analysis, simulation, and testing of NVH (Noise, vibration, harshness) isolation parts for OEMs market
- Developing control systems for hydraulic and pneumatic test equipment
- Calibrating and maintaining MTS and Instron testing machine & hydraulic equipment
- Managing test projects for new vehicle model components development
- Assisting produce new metal components for prototype with CNC machine
- Modifying existing product drawings and interpreting drawing specifications with Catia

Design Engineering Co-op

May 2013 to December 2013 Idex Corporation ï¼ Irvine , CA

- Participated in research and development of new hydraulic products in project teams
- Created new or modified existing hydraulic product drawings using Autodesk Inventor
- Installed strain gauge on hydraulic tubes and measured its corresponding fluid stress
- Carried out multiple laboratory hydraulic tests for design and product verification
- Analyzed test results, generate test reports, and maintained engineering database

Student Technical Support

January 2008 to April 2013 Lake Michigan Credit Union ï¼ Livonia , MI

- Assisted in managing computer labs/classrooms, including over 400 computers
- Set up and install computer (software, hardware and network system)
- Troubleshooting computer (software & hardware), printer and other electronic devices
- Managing and organizing inventories and supplies ensure it meets the weekly demand

Media Production Intern

June 2009 to July 2009 ZeroCanvas Design Group ï¼ City , STATE

Graphic Design, video and sound producing, filming, editing.

Accomplishments

2015 BMW X5 Chassis Suspension Bushings Test (YUSA R&D) February â€“ June 2015

â€¢ Providing NVH data for Honda & YUSA engineers on the 16 BMW competitive components

â€¢ Analysis bushing structure in order to using Catia program designing 13 corresponding fixtures for testing

â€¢ Performed 85 static & 60 dynamic spring rate tests with MTS & Instron equipment, produced 30 lab reports

2015 Acura TL Sub-Frame Engine Mount Noise & Vibration Reduction (YUSA R&D)

August â€“ October 2014

â€¢ Assisting designer analysis NVH testing data in order to select the appropriate rubber for massive production

â€¢ Performed 200 assembly tests (static & dynamic spring rate) on engine mount prototype with Instron machine

â€¢ Performed multiple durability tests at specific load force up to one million cycles with MTS machine

Parflange ECO25 Tube Flanging and Flaring Unit (Parker Hannifin)

August â€“ December 2013

â€¢ Assisted in redesigning the machine to improve its accuracy and reliability

â€¢ Rewired the circuits of hydraulic pumps for durability testing on various fittings and analyzed related damage

â€¢ Tested the new design for internal inspection to ensure the product meets industry standards

Phastite Tool (Parker Hannifin)

September 2013

â€¢ Designed shipping packaging for the Phastite Tool machine and its accessories

â€¢ Performed cycle durability testing on various tube fittings and analysis the corresponding damage

TP1025 Tube Prep Center (Parker Hannifin)

July 2013

â€¢ Re-designed the platform layout with alternative equipment by creating 3-D models using Autodesk Inventor

â€¢ Tube Processing: Cut, deburr and flange different types of tubes and pipes

Honda Fuel Level Measurement (Honda R&D Americas, Inc)

October 2012 â€“ April 2013

â€¢ Developed a system to measure the liquid level inside a vehicle fuel tank for Honda R&D

â€¢ Using Solidwork analysis 3-D tank model to selecting the appropriate location for the pressure sensor

â€¢ Acted as team leader and client liaison between the team, university and company

â€¢ Worked on the prototype design and build

â€¢ The only team able to complete the project with less than half of the budget

Skills

Technical Software: Autodesk Inventor, SolidWorks, Catia, MATLAB, and Enovia

Data Acquisition: LabVIEW, LMS, National Instruments, Vibration Research

Machine: CNC machine, Leak & burst stand, Instron material testing, MTS static, dynamic, durability machine

Equipment: Torque wrenches, torque vise, hardness tester, optical comparator, digital microscope

Processing & Fabrication: Metallurgical saw, cold saw, band saw, torque tension machine, pedestal grinder

Computer troubleshooting skills: software, hardware, OS, network, virus, spyware detection, system malfunctions

Basic financial analysis: Asset evaluation, cash flow, depreciation, inflation, tax

Languages

English

Mandarin Chinese

Cantonese Chinese

Japanese

Affiliations

ASME (American Society of Mechanical Engineers)

SAE (Society of Automotive Engineers)