

MECHANICAL DESIGN ENGINEERING INTERN

Summary

To secure a full time Combustion Engineer position applying strong fundamentals for application, research, and development in the areas of Combustion and Fluids and Thermal Sciences and other allied Mechanical Engineering related functions

Highlights

AutoCAD Mechanical, Pro/Engineer (Pro/E), MATLAB, PTC Creo, Revit, Autodesk Inventor, GD&T, Solidworks, Microstation, ANSYS Mechanical and Microsoft Office (Word, Excel, PowerPoint, Project) Tools

Experience

Mechanical Design Engineering Intern 05/2014 to 08/2014 Company Name City , State

- Familiarized with & utilized ASME Engineering Design, Drafting & Documentation Standards Provided support to the engineering team in developing conceptual layout drawings and performed various engineering studies to obtain the simplest and the most efficient engineering solution for Pressure Vessel design and piping design and specification Developed drawings, schematics and P&ID's using AutoCAD Mechanical and Microstation according to ANSI Document Control & Management System for electronic as well as hard copy documents - Coordinated the organizing, scanning, retrieval and distribution of engineering documents for Project Managers.

Manufacturing Engineering Intern 08/2012 to 05/2013 Company Name City , State

- Designed and successfully operated a Compact Inserts Drying Machine Researched past techniques used for drying of inserts to identify the flaws and consolidated ideas in a team of three people on how to eliminate theses flaws Designed a pneumatic cylinder to lift the cabinet door using a Direction Control Valve Modelled an aesthetically good looking cabinet head using Pro/Engineer (Pro/E) Calculated the required heat transfer rates and air flow rates for the appropriate selection of SILVENT air nozzle and KANTHAL air heater Increased the production rate by 16.67% and reduced the cycle time by 1 minute and floor area by 61.87% Reduced the overall power consumption thereby increasing the profit by Rs. 426,336 per annum.

Mechanical Engineering Intern 06/2011 to 07/2011 Company Name State

- Opportunity to learn more about Fixed and Rotary Wing Aircraft Engines and their thermodynamics Exposed to different kinds of turbo machines for e.g.
- Gas Turbines, and the application of the concepts of fluid mechanics and heat transfer to their working The training also involved a know-how of Avionics and Accessories and MRO (Manufacture, Maintenance, Repair and Overhaul) Activities Hands-on experience with Lathe, Drill, Mill and CNC Machine.

08/2014 to 12/2014 Company Name

- Sponsored by New York State Energy Research and Development Authority (NYSERDA) as a part of advance innovative energy solutions Reviewed the existing literature on the different pyrolysis models used to characterize biomass Performed heating experiments using a DSC-TGA to study the pyrolysis of BioBlock Using TGA, calculated the kinetic parameters like activation energy and rate constant from the obtained mass v/s temperature and derivative of mass loss v/s temperature curves Determined the heat of pyrolysis and specific heat using the heat flow v/s temperature and derivative of heat flow v/s temperature curve obtained from the DSC Finally, created a decomposition model based on the experimental results Solving Non-Linear Euler Equation for Gas Dynamics using CFD tools, November 2014 - December 2014 Solution for the Euler equation for Gas Dynamics was obtained using First Order Lax Friedrich Scheme, Runge - Kutta Fourth Order - TVD Scheme and Lax Wendroff Method Fundamental properties of the schemes were compared and discussed in detail Solution obtained by each numerical method was presented along with a conclusion on which of the 3 methods was more accurate Numerical solution to the Prandtl-Glauert equation for inviscid, non-heat conducting perfect gas free flow, September 2014 - October 2014 In this project, the Wave Equation is solved using two different numerical methods, namely Successive Over- Relaxation and Alternating Direction Grid generation is discussed in detail and results obtained using analytical as well as numerical methods were compared FBG Sensors in Oil/Gas Permanent Downhole Measurement Applications, January 2014 - May 2014 Analyzed how FBG Sensors are used for Permanent Downhole Measurement Applications Studied the sensing mechanism of FBG Sensors Summarized the/ findings in the form of report and power point presentation Closed-Ended Oscillating Heat Pipe, October 2011 Presented a seminar on Closed-Ended Oscillating Heat Pipe as a part of coursework Discussed in detail the basic concepts, principle of operation, advantages, limitations and unique applications of the non-conventional heat pipe.

Education

Master of Science : Mechanical Engineering December 2014 SUNY, University at Buffalo GPA: GPA: 3.4/4.0 Mechanical Engineering GPA: 3.4/4.0

Bachelor of Engineering : Mechanical Engineering May 2013 University of Pune GPA: GPA: 3.6/4.0 Mechanical Engineering GPA: 3.6/4.0

Academic Combustion, Heat Transfer, Fluid Mechanics, Computational Fluid Dynamics, Applied Thermodynamics, Turbomachines, Combustion Laser Diagnostics, Industrial Fluid Power, Metallurgy, Machine Design, Mechanical System Design, Advance Material Science and Material Science & Corrosion

Publications

Student Member: Society of Automotive Engineers, May 2010 - May 2013 Presented a paper on 'Alternate Fuels in IC Engine' at PVG College of Engineering, Pune 2011 Presented a paper on 'Removal of Toxic Metals from Wastewater by Activated Carbon from Agro-Industrial By-Product' at MMM College of Engineering, Pune 2011

Skills

Academic, ANSYS, AutoCAD, basic, CNC, Direction, Documentation, Drafting, DSC, Engineer, Laser, Lathe, layout, MATLAB, Mechanical, Excel, Microsoft Office, PowerPoint, power point, Word, Microstation, Mill, Oil, organizing, profit, Research, scanning, schematics, Scheme, Solidworks, specification, System Design, unique