JITHISH K S
Indian Institute of Technology Madras

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CAREER OBJECTIVE

To take up a challenging job in the field of Mechanical engineering by associating myself with an organization which would provide ample opportunities to put my skills and knowledge to the best use for the benefit of both and ultimately, for the overall development of the society.

EDUCATION

Program	Institution	%/CGPA	Year of Completion
M.Tech in **Mechanical Engineering** (Manufacturing & Precision Engg.)	IIT Madras	7.69/10	2013
B. Tech in **Mechanical Engineering**	SNG College of Engineering, Kerala	67.21%	2010
H.S.C (Computer Science)	Jayakeralam H S S, Perumbavoor, Kerala	77%	2006
S.S.L.C(Kerala Board)	Guardian Angel English Medium H S S, Kerala	76.5%	2004

TRAINING COURSES

- **Master Diploma in Mechanical CADD**
  [AutoCAD, CATIA, SolidWorks, ANSYS, Primavera, PPM concepts, GD&T]
  CADD CENTRE, Register No: 0910MECH446449
- **HSE (Health Safety and Environment)** Training from BPCL Kochi Refinery,7-9th Sept 2010

SCHOLASTIC ACHIEVEMENTS

- Valid **GATE SCORE** (Graduate Aptitude Test in Engineering) conducted by IIT Madras in GATE 2011 with All India Rank **502** and Percentile **99.38%**
- Recipient of Ministry of Human Resources Development (MHRD) scholarship at IIT Madras, India, 2011-2013.

COURSE WORK @ IITM

- Computational Methods in Engineering
- Robotics and Robot Applications
- Metrology and Computer Aided Inspection
- Computer Aided Design in Manufacturing
- CNC and Adaptive Control
- Advanced Materials and Processing
- Microprocessors in Automation
- Sensors for Intelligent Manufacturing and CM
- Mechatronic Systems
- Oil Hydraulic and Pneumatic Systems
- Applied Finite Element Analysis
- Machine Vision and its Applications
- Metal Removal Processes
- Design for Manufacture & Assembly

LAB WORK @ IITM

Manufacturing and Precision Engineering Lab (I and II)
- KUKA Robot task programming
- Machine Centre programming and tool presetting
- Hydraulics
- CNC Turning centre programming and machining
- Robot Tele-operation and robot calibration
- Measurement of force during surface grinding
- CAD lab
- Measurement of roundness and roughness
- Contact and Non-contact Co ordinate measuring machine
- Microprocessor programming
- Study of sensors
- Amada sheet metal cutting lab
- Amada sheet metal bending lab
- Metrology & CAI lab
- Electrical discharge machining

COMPUTER SKILLS

- **Programming software's:** C,C++,Oracle basics
- **Operating Systems:** Windows 7, Vista, Windows XP, Linux, MS Office
- **Designing and modeling software's:** AutoCAD, Pro/ENGINEER, CATIA, SolidWorks, ANSYS, GD&T, LMS AMEsim
- **Mathematical software:** Matlab Basics
- **Project and program management Software:** Primavera, PPM concepts

ACADEMIC PROJECTS

- **Modeling Simulation and Analysis of a pressure compensated Axial Piston Pump, M.Tech Project**
  Guide: Prof.M.Singaperumal, Professor & Former Dean (Admin), Dept of Mechanical Engg, IIT Madras
  Co Guide: Dr.Somashekhar.S.H, Assoc Professor & HOL, Dept of Mechanical Engg, IIT Madras
  (May 2012-May 2013)
  - Static and dynamic characteristics of Pressure Compensated Axial Piston Pump are studied.
  - The analysis is performed by computer simulation using **LMS AMESim** through which significant parameters of the pump complete unit are determined.
  - A standard Pressure Compensated Axial Piston Pump is simulated and the results show good agreement with the manufacturer's dynamic operating curves.
  - Validated the proposed model with data available in published literature.
  - Optimised the control valve for the pump for various aerospace applications.
- **Design and Fabrication of a Three axis Hydraulic Modern Trailer, B.Tech Project**
  Guide: P.SIVA, Asst Professor, Dept of Mechanical Engg, SNGCE Kerala
  (Nov 2009-April 2010)
  - A suitable arrangement has been designed to unload load from trailer in three axes without application of any impact force.
  - A working Model is fabricated which can unload loads up to 40kgs

PROFESSIONAL EXPERIENCE

May 2010 to June 2011

- Worked as **Mechanical Engineer** in **Bharat Petroleum Corporation Limited- Kochi Refinery [BPCL-KR]** with **Prayaga Engineering Constructors**, Ernakulum (dist), Kerala, India-682 302

Projects Involved:

- **CBD Process Piping Project** in Fluid Catalytic Cracking Unit (FCCU), comprising FPU,GCU, COMPRESSOR ,MEROX AND BOILERS
- **Fire Water Pipeline Project** in WAGON LOADING,FCCU,CEMP II,LPG Sphere, ACTP Subway
- Dismantling of old **MAB (**MAIN AIR BLOWER) in FCCU-Compressor

- Alloy Steel Piping for the Pumps EP-6C and EP-6D in FPU plant
- Overhauling and Maintenance jobs of Pipelines, Heat Exchangers, and Pumps etc……..
- Engaged in **FCCU Shut down in April 2011**
  (The quantity of catalyst meeting the Vacuum gas oil is controlled by a temperature controller located on top of the reactor and its failure resulted in huge quantities of catalyst mixed with VGO to enter the reactor, Heat Exchangers, pumps, Pipelines etc. The 12 days shutdown is done so as to remove the solid catalyst which blocked inside the heat Exchangers, pumps, Pipelines etc in the Main Column Bottom circuit)

- **Engaged in the SRU shutdown Piping in February 2011**
  (Involved in the fabrication and erection of pipelines (nearly 1000 inch diameter)

Responsibilities and Achievements:

- A multilevel exposure in **Petroleum Refinery.**
- Good knowledge in **Non Destructive Testing** methods conducted in a refinery.
- Good knowledge of **Pressure testing.**
- Able to interpret **Piping & instrumentation, Process Flow Diagram, Piping layout and Isometric drawing.**
- Preparation of **Isometric drawings.**
- Carried out various IBR, Non IBR, Alloy Steel, SS, Cement Coated Firewater pipe line Works**.**
- Offsite **A/G & U/G** Piping **jobs & hot tapping.**
- Familiar with **Routing of Pipeline** according to site requirement inside the refinery.
- Inspection of pipeline supports and fit-ups to be welded.
- Execution of detailed design and construction, including execution of procedures as per **International standards and codes.**
- Revamping of the fire water line by providing **cement lining**.
- Familiar with **wrapping and coating** done for underground lines.
- Familiar in **Billing** of works done.
- Material planning and procurement, Manpower and machineries planning and scheduling.
- Good knowledge over the **work permits system** in a refinery.
- Exposed to Hazardous conditions, **safety** norms.
- Performed duties with regard to **health and environmental safety**
- Manage subordinates, work force, consumable and non consumable commodities.
- Engaged in commissioning activities such as air flushing, stream blowing, and final box up of lines with specified gaskets & nut/ bolts.

PERSONAL DETAILS

Date of Birth	:	14th April 1988
Name of father	:	K.P.Sivasankaran Nair
Name of Mother	:	Mini Sivasankaran
Religion & caste	:	Hindu, Nair
Sex	:	Male
Marital Status	:	Single
Permanent Address	:	Kavanathazhathu (H), Pezhakkappilly P O, Muvattupuzha, Ernakulam, Kerala, INDIA-686 673 Ph: +91 485 2549516
Language known	:	English, Malayalam, Hindi.