ANIRBAN MANDAL | 19ME61R16

MANUFACTURING SCIENCE AND ENGINEERING

EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2021	M.TECH	IIT Kharagpur	8.76 / 10
2017	B.TECH	Visvesvaraya National Institute of Technology, Nagpur	7.23 / 10
2013	H.S.C	Board of Intermediate Education, Andhra Pradesh	95.40%
2011	S.S.C.	Central Board of Secondary Education	10 / 10

COURSEWORK INFORMATION

Postgraduate Course: - Finite and Boundary Element Methods in Manufacturing, Numerical Modelling of Manufacturing Processes, Metal Forming, Theory of Machining, Theory of Abrasive Machining, Robotics.
Undergraduate Course: - Thermodynamics, Fluid Mechanics, IC Engine, Strength of Materials, Heat Transfer, Material Science

SKILLS AND EXPERTISE

- Design Tools - CATIA, CREO, Solidworks, Siemens NX
- Simulation Tools - ABAQUS, ANSYS (Workbench)
- Computational Tools - MS Word, MS Excel, MS Powerpoint, C , C++ , MATLAB, OCTAVE, Python
- Teaching Assistantship - Conducting Workshop Labs (Welding) of B.Tech 1st year.

PROJECTS

M.Tech project - Effect of tool geometry and process parameters on chip formation in turning of Ti-alloy

- **Finite Element Analysis** (FEA) will be implemented with the help of commercial FEA software (Abaqus)
- User-defined sub-routines would be used to incorporate material model, friction model for execution of the project.
- Those sub-routine would be developed in Fortran and integrated with the commercial software to give better solutions.

B.Tech project - Thermal Analysis and Material Selection for Railway Brake Pads

- The project was dedicated to give a proper solution for the continuous regular damage to the brake pads of railway locomotives due to excessive frictional heat occurring in between the wheel and brake shoe.
- Three dimensional finite element analysis was carried out using ANSYS for predicting the temperature profiles.
- Material selection for new proposed brake shoe was carried out and comparison done with later results.

WORK EXPERIENCES

- Worked as ***Plant Engineer*** at ***SUPERGAS*** (***SHV Holdings***) from August 2017 till December 2017.
- The work involves all the management, technical and non-technical responsibilities i.e. form the work force management till the overhauling of the machine parts. The safety was the utmost priority given in the plant as we were handling LPG, thus safety drills, disaster management, quarterly audits of the machineries were the prime aspects.

INTERNSHIPS

Industrial Internship at SAIL Bhilai Steel Plant, Bhilai (23 May - 18 June, 2016)

- Completed a project on "Study of 10 Roll Assembly set of Continuous Casting Shop (CCS) in MARS-2 Department "
- Studied the continuous casting process, the disassembling, restoring and assembling process of the 10 Roll Set assembly.
- Visited various departments like Blast Furnace, Plate Mill, Rail Mill etc. which directly or indirectly useful for the end product.

Industrial Internship at Rashtriya Ispat Nigam Limited, Vishakhapatnam (15 June - 27 June, 2015)

- Completed a project on "Study of mechanical equipments in Blast Furnace and modification in De-dusting system ".
- Studied the parts of blast furnace, coal handling system, conveyor and the working of the plant in brief.

POSITIONS OF RESPONSIBILITY

Event Manager, AXIS (Technical Festival of VNIT Nagpur) (October 2014 - October 2015)

- Increased footfall and participation in **Mechatryst Event** and made the problem statement for the participants.
- Handled the event having highest prize money of **1 lacs** in the Tech Festival with **lowest** inhouse budget.

Co-Head Chassis Department, SAE Collegiate Club (Team V-LOCITY), VNIT Nagpur (May 2014 - September 2015)

- Worked for **Automotive Collegiate Club** in designing and manufacturing of Formula style vehicles for the purpose of better understanding and participation in engineering design, modelling, testing and racing competitions.
- Represented the Team in **SUPRA 2015**, at Chennai, the event organized by Society of Automotive Engineers (SAE), India
- Co-designed the **Chassis or Roll cage** and **Ergonomics** of the vehicle in consideration with optimization in the cost building.

CERTIFICATIONS

- Completed a course on programming language "**C** "for better understanding of basics of coding.
- Completed a course on the professional modeling software "**CREO** "for better understanding of CAD Modeling and simulation.

EXTRA CURRICULAR ACTIVITIES

- Participated in Volleyball, Cricket, Kabaddi, Kho Kho in Intramurals of VNIT Nagpur
- Bagged **First position** in Dramatics event called **AAROHI** OF **VNIT Nagpur** in February 2014.
- Bagged **First position** in Dramatics event called **PEARL** of **BITS Hyderabad** in March 2014.

!self declaration by the student