



National Education Society (R)

**JAWAHARLAL NEHRU
NATIONAL COLLEGE OF ENGINEERING, SHIMOGA**

MECHANICAL ENGINEERING

Research Laboratories:

The department has got the following research laboratories, where research activities are continuously carried out.

4. Inverse FEM Laboratory

Inverse FEM laboratory was established in the year 2006-07 with the intension to carryout research project using inverse finite element technique and with the use of virtual instrumentation tools.

Rupees Six Lakhs (6,00,000/-) was sanctioned from Research Promotion Scheme (RPS) during the financial year 2007-08 to carry out the research project titled “ INVERSE FORCE IDENTIFICATION IN COMPLEX STRUCTURES AND MACHINES”. Dr.D.S.Ramakrishna, Prof.& Head, Dept. of Mechanical Engineering, JNNCE, Shimoga was the Principal Investigator and S.L.Gombi, Professor, Dept. of Mechanical Engineering, GIT, Belgaum was the Co-principal investigator for this research project.

Rupees Six Lakhs Thirteen Thousand (6,13,000/-) grant was received from Modernization and Removal Obsolescence (MODROBS) scheme during the year 2008-09 to meet the expenditures in the modernization of laboratory.

The facilities of inverse FEM laboratory includes

1. Lab-View VI software
2. Laptop (DELL)
3. Data Acquisition (DAQ) Hardwares (4 Channel and 16 Channel)
4. 10 Channel digital strain indiator
5. Impact Hammer (Peizo electric)
6. Accelerometers
7. ICP Signal conditioners
8. BNC Plugs
9. Strain gauge cables etc.

Research projects carried out using these facilities:

- a) “Experimental Method of Force Measurement on Cantilever Beam” by Srinivas .L.Gombi and Dr.D.S.Ramakrishna.
- b) “Determination of Operating Forces on Shaper Component” by Srinivas .L. Gombi and Dr.D.S.Ramakrishna.
- c) “Evaluation of Natural Frequencies and Damping Ratios of CSPE Composites” by Manjunatha Chary G.H and Dr.K.Sabeel Ahmed.

Also, several UG and PG projects were carried out in this laboratory.