



SANDIP FOUNDATION'S
SANDIP INSTITUTE OF TECHNOLOGY AND RESEARCH CENTRE ,
NASHIK
DEPARTMENT OF MECHANICAL ENGINEERING
E-BULLETIN

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Vision of siTRC

To be acclaimed
Institution for
learning and research

Mission of siTRC

To impart in-depth technical
knowledge.

To create conducive
environment for research,
innovation and
entrepreneurship.

To instill the social and
cultural values.



From the HoD's Desk

I am happy to learn that Mechanical Engineering Department, Sandip Institute of Technology and research Centre is coming out with the quarterly departmental E-Bulletin. This E-Bulletin will help to share the news, events achievements of the department among alumni. This E-Bulletin will provide an opportunity for the staff and students to showcase their talents in technical writing. I would like to appreciate and congratulate editorial team of the department for their unrelenting efforts in compiling this E-Bulletin.

From the editor's desk

It gives us an immense pleasure to introduce this E-bulletin of Mechanical Engineering Department. Proper communication plays a vital role in institution's development. This E-bulletin will serve to reinforce and allow increased awareness, improved interaction and integration among all of us. This E-bulletin will be a medium to provide proper acknowledgement and respect all of these efforts and its results.

VISION OF THE DEPARTMENT

To achieve excellence in the domain of Mechanical Engineering by inculcating a culture of learning and research.

MISSION OF THE DEPARTMENT

- To nurture the students of Mechanical Engineering to be competent, motivated and ethical professionals.
- To foster research, innovation and entrepreneurship skills leading to employable and self-reliant technocrats.
- To groom the socio-techno potential for up-liftment of society.

PROGRAMME EDUCATIONAL OBJECTIVES (PEO'S)

- PEO 1: To pursue and establish the career in Mechanical Engineering.
- PEO 2: To demonstrate personal growth by pursuing higher studies, professional development course and/or engineering certifications.
- PEO 3: To inculcate entrepreneurship skills and nurture the ethics in the domain.

PROGRAMME OUTCOMES

1. **Engineering Knowledge** – Apply knowledge of mathematics, science and engineering to solve the real life problems in Mechanical systems. An ability to analyze and interpret data.
2. **Problem Analysis** – Identify, formulate and solve Mechanical Engineering problems in thermal, manufacturing and machine design and conduct new experiments.
3. **Design/development of Solutions** – Design systems like thermal, robotics, mechatronics and machines within realistic constraints.
4. **Conduct investigations of complex problems** – Design and conduct experiments to interpret data and analyse the results.
5. **Modern Tool Usage** – To develop awareness and work on emerging technologies like CAD/CAM software's, Robotics.
6. **The engineer and society** – Understand the impact of an engineer in general and Mechanical Engineering knowledge for welfare of society in particular.
7. **Environment and Sustainability** – Develop or modify eco-friendly and highly reliable as well as sustainable systems.
8. **Ethics** – Take professional decision with a sense of ethical responsibility.
9. **Individual and team work** – Function effectively as an individual and as a member or leader in multidisciplinary and/or cross cultural teams.
10. **Communication** – Communicate effectively for achievements of goals.
11. **Project Management and Finance** – Execute disciplinary and interdisciplinary projects in day-to-day life.
12. **Life-Long Learning** – Imbibe habit of lifelong learning.

ABOUT THE DEPARTMENT

The department is having highly qualified, experienced & motivated faculty members. The department has laboratories with latest testing facilities like multifuel VCR engine, computerized UTM (capacity 100 tonnes), computerized diesel engine test rig & exhaust gas analyzer for Engines. The CAD Centre of the department armed with latest hardware & software like Pro-E wildfire-5, ANSYS, Hypermesh, Mastercam, and AutoCAD etc. Department also have MOU with Altair Engg. Corporation (India) for conducting training on HyperMesh, Radioss (Linear), HyperForm, HyperCrash etc. The strength of department enables to offer the consultancy in all fields related to Mechanical Engineering.

Professor and Head

Departmental activities

Induction Programme for First Year Mechanical Engineering Students

Department of Mechanical Engineering of Sandip Institute of Technology and Research Centre conducted academic induction program for newly admitted First year Mechanical Engineering students on 09/08/2017. During program Dr. M. M. Patil, HOD, Mech. Engg. Dept. guided the students about 'Careers in Mechanical Engineering, Faculty Information, Course Structure, different activities conducted by the department. The programme was very fruitful for the newly admitted FE students of Mechanical Engineering.



“Awareness on Fast Fourier Transform Analyzer”

Department of Mechanical Engineering organized Expert Lecture on “Awareness on Fast Fourier Transform Analyzer” delivered by Mr. Ishan Kembhavi, Welan Technologies, Pune for TE Mechanical. Mr. Ishan Kembhavi having vast experience in the field of Noise and vibration analysis and he is working in Welan Technologies, Pune. Fast Fourier Transform analysis is a method widely used in industries to identify dominating frequencies in the operating frequency range. Mr. Ishan Kembhavi explained Fourier's theorem that any waveform in the time domain can be represented by the weighted sum of sines and cosines. The FFT spectrum analyzer samples the input signal, computes the magnitude of its sine and cosine components, and displays the spectrum of these measured frequency components. He explained vibration data acquisition using tri-axial accelerometer and it's process of data extraction.



Industrial visit to Narang Cold Storage

As per the curriculum of the SPPU, industrial visit to M/s Narang Cold Storage was organized for final year students of Mechanical Engineering. It is situated in Satpur MIDC, Nashik on an approximate area of 5 acres and stands a leading storage for preservation of agro products cultivated in Nashik region. Total **100** students from both final year classes accompanied by 4 staff members visited the plant . Mr. Raut and Mr. Pandit looking after day to day affairs of the storage greeted all at the site. A brief introduction about their plant activities was given. Batches of 20 students were formed for effective and closer observations of various subunits. Plant operators on duty showed various sections of the plant to all batches. First students in batches were taken to compressor unit housed in a room on the ground floor. Thereafter cooling tower placed on the first floor was visited. Finally the students were moved to multi-storey cold storage building to see evaporator design and functioning. Students were also shown ice plant of 15 TR capacity built in the same premises but currently not in operation. All the necessary technical details associated with each unit were collected. Students were asked to prepare a schematic layout of overall plant showing flowpath of refrigerant.

