



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. The strength of department enables to offer the consultancy in all fields related to Mechanical Engineering.

Professor and Head

Departmental activities

Industrial Visit to Krishirath Farm (Cold Storage)

Industrial visit to Krishirath Farm, Ojhar was organized for the Third Year Mechanical Engineering Students. Total 140 Students and 05 Staffs Members were present for the plant visit. The Owner of Krishirath Farm, permitted to visit their Cold Storage by considering the academic importance and practical exposure to students for Refrigeration & Air Conditioning Subject. As a part of academic, it is mandatory to conduct industrial visit to a **Cold Storage** according to **T.E. Mechanical** syllabus, **University of Pune**. The service Engineer of **Krishirath Farm** guided our students during plant visit, they had explained in detail working of cold storage, technical specification of the various processes & equipment involved in working of cold storage. During Plant visit, service Engineer had elaborated the different steps involved in working of cold storage such as loading, pre-cooling, shifting to room of cold storage, packing & delivery of products etc. This industrial visit was a very successful and students will have definitely an added advantage of practically observing the process.



Guest Lecture on “Modern Thermal Power Plant”

Department of Mechanical Engineering organized Expert Lecture on “*Modern Thermal Power Plant*” delivered by Mr. Rushikesh Chopade, Maruti Hydraulics for BE Mechanical. Mr. Rushikesh Chopade, having vast experience in the field of *Modern Thermal Power Plant* Mr. Rushikesh Chopade shared his experience and also encouraged the students to take up careers in power sector giving a bird eye view of the power industry. He also shared many real life cases of working; modification and maintenance of various equipments in power plant especially cogeneration power plants.

Industrial Visit to RattanIndia Power Ltd, Sinnar

RattanIndia Power Ltd under flagship of Indiabulls has installed coal fired thermal power plant. It has five units, each of them having yield of 270 MWe, totaling to 1350 MWe. One of the units has been commissioned and demonstrated its full operational status as per norms. The plant is equipped with the set of ultramodern technology. First safety instructions while moving in the plant area were briefed by the safety officer. Groups of students were sized to 25 for better clarity in studying the plant. Each of the five units has dedicated control panel. Different controls and monitoring of overall plant operations done from Main Control Unit was illustrated to each group. Safety alarms, load dispatch center were shown on computer screens. Students were taken to Turbine Room for observing massive turbomachines. Standard practices in operating Turbogenerators were shown by the operators. Huge installation of boiler located outside the main building was shown. All the students were then taken to see Ash Handling Unit which forms an indispensable part of any thermal power plant. Operations of special compressors used for compressing ash slurry for dumping into ash pond were understood. In the last phase, all batches were taken to know coal crushing unit which is far away from main power plant building. The automated coal crushing system to crush the coal to desired size 250 μm was explained. The visit ended after giving warm appreciation towards Mr. Moon, Mr. Mohite and all their technical staff.



Expert Lecture on - Supply Chain Management (SCM)

Department of Mechanical Engineering organized Expert Lecture on “*Supply Chain Management (SCM)*” delivered by **Mr. Ghanshyam Joshi, Associate Manager, Bristlecone India Pvt. Ltd. (A Mahindra Group Company)** for students of BE Mechanical. Mr. Ghanshyam Joshi is having 15 years of experience in the field of SCM in leading companies such as Good Year, Wipro, and Tata Motors etc.

Mr. Ghanshyam Joshi explained the importance of SCM in industry which is responsible to make this world a global village. Nonetheless, SCM is seldom taught in the classroom. With increase in the complexity with which products are being manufactured, SCM is getting complicated beyond the proportions. It takes specialized manpower as well as tools and system to tackle these challenges. He discussed with students regarding these challenges and how to overcome them.

