



HOPE Foundation's
Finolex Academy of Management & Technology,
Ratnagiri
Mechanical Engineering Department

A Programme on Maintenance Engineering: Theory and Industrial Practices

The Department of Mechanical Engineering organized a **52-hour** program on **Maintenance engineering: Theory and Industrial Practices** in association with sessions on in association with **Finolex Industries Limited, Ratnagiri** for the **125 final year Mechanical Engineering students**.

Maintenance Engineering Laboratory Course for B.E. consists of condition monitoring, machine fault detection, diagnosis, and prognosis. In view to impart practical exposure to the students, Mr. B N Jadhav, General Manager (Central Engg. Services), Finolex Industries Limited was invited to conduct the course. The mechanical maintenance issues such as - unbalancing, misalignment, bearing defects and mechanical looseness were addressed in detail through theory sessions conducted in the institute. The practical exposure was given during the industrial visit at Finolex industries to demonstrate the maintenance practices related to above mentioned issues. The maintenance staff demonstrated the mechanical components used in machineries.

During theory sessions, the following aspects were covered:

- 1) Types of vibrations and causes of vibrations
- 2) Different ways of vibration measurement
- 3) Equipment's used for vibration measurement and their interpretation.
- 4) Case studies of fault diagnostics using mechanical vibrations for components like Bearing, Gear box, pumps etc.

During industrial visit, students visited the following sections to get familiar with actual industrial practices:

- 1) O&U section
- 2) VCM Section
- 3) PVC section

In context with above sections, Students were able to understand functioning of a variety of pumps, boilers, compressors, valves, bearings and other mechanical equipment along with working of - air separation unit, cooling tower and water conditioning unit. The students get acquainted with condition monitoring, fault diagnosis and maintenance engineering related practices followed by the industries.

Event objectives:-

- 1) To acquaint with the process of conditional monitoring and machine fault diagnosis

- 2) To acquaint with the industrial practices related to condition monitoring and machine fault diagnosis

Event Outcomes:- Learners will be able to...

- 1) Identify common faults in machinery using vibration spectrum
- 2) Interpret vibration signals for monitoring
- 3) Interpret vibration signals for prognosis
- 4) Modern tool usage used for condition monitoring
- 5) Write report based upon industrial practices for condition monitoring observed during industrial visit



Inaugration of Theory Session (Felicitation of Mr. B N Jadhav by Dr M S Kirkire, HoD Mechanical)



Session on Vibration spectrum By Mr. B N Jadhav



Session on bearing fault detection



Felicitation of Mr B N Jadhav by Dr S S Goilkar during concluding theory sessions



Prof S S Malusare along with students during visit at FIL



Prof M L Naik along with students during visit at FIL



Students with Mr B N Jadhav, General Manager, FIL