



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

One Day workshop on
**Preventive and Predictive Maintenance of Machines Using
Vibration Analysis**

The Department of Mechanical Engineering organized a one day workshop on **Preventive and Predictive Maintenance of Machines Using Vibration Analysis** by **Mr. Sudarshan Lakha** under the guidance of **Dr. Kaushal Prasad** (Principal) and **Dr. M. S. Yadav** (HoD, MechanicalEng.) on 23rd August 2019.

Prof Tushar Kavatkar, **Prof. Sachin Mestry**, **Prof. Harshal Salvi** and **Prof. Sumit Malusare** (Asst. Prof.MED) coordinated the workshop. **Mr. Sudarshan Lakha** was felicitated by **Dr. Kaushal Prasad** and introduced **Prof. Tushar Kavatkar**.



Felicitatation of Resource person Mr. S. V. Lakha by Dr. Kaushal Prasad

Dr. Kaushal Prasad, Principal and **Dr. M. S. Yadav** emphasised the significance of workshop to the students. **Mr. S. V. Lakha** (BE Electronics, COEP) has 35 years' Experience in Machinery maintenance & fault diagnosis through vibration analysis, system designing and implementation of preventive & predictive maintenance program's in many process plants.



Dr. Kaushal Prasad, Principal addressing the participants



Dr. M. S. Yadav (HoD, Mechanical Engineering) addressing the participants



Mr. Sudarshan Lakha conducting the session

Mr. Sudarshan addressed on:

❖ **Introduction to Maintenance (whyvibration?)**

- Importance
- Economics
- Types
- Why vibration? / Other alternatives

❖ **Vibration (How it works?)**

- What is vibration?
- Different types of sensing / merits and demerits
- Significance of acceleration / velocity / displacement
- Significance of signal parameters amplitude / frequency /phase / time wave
- steps, measurement, trending / monitoring, analyses, correction balancing,
- alignment

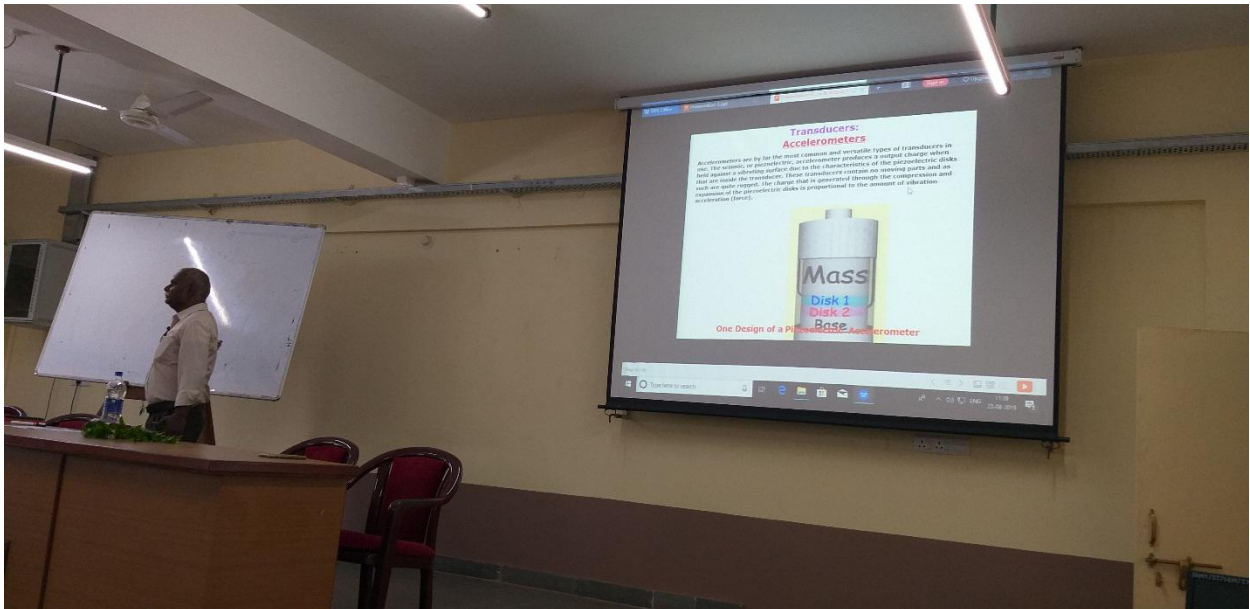
❖ **Tools of Implementation**

- Software hardware options
- Segregation / mapping of assets
- Designing a monitoring system offline and online
- Implementation by way of selection of the tools
- Report preparation and presentations

❖ **Advance tools of vibration study**

- Unbalance
- Misalignment
- Looseness
- Resonance
- Bearing fault
- Foundation problems
- Coupling
- Spectrum analysis
- Time wave form analysis
- Phase analysis

❖ **Case studies & Documentations**



Mr. Sudarshan Lakha interacting with the students



Students of TE and BE mechanical attending the workshop



Mr. S. V. Lakha along with the students during the end of the last session of workshop