RECRUITMENT BROCHURE 2018-19
INDUSTRIAL TRIBOLOGY MACHINE DYNAMICS
AND MAINTENANCE ENGINEERING CENTRE
(ITMMEC)

INDIAN INSTITUTE OF TECHNOLOGY
DELHI
ABOUT ITMMEC

ITMMEC offers an MTech Programme in “Industrial Tribology & Maintenance Engineering”. In addition to fresh graduate engineers this programme has attracted engineers sponsored by various industries. This programme is supported by qualified faculty members from various disciplines. Being an industry oriented Centre a strong emphasis is given on industrial problems which needs a deep understanding of alongside courses.

The Centre introduces postgraduates to topics that are highly selective yet extremely important to any organization. Coursework with focus on maintenance diagnostics tribology, lubrication etc. give students insight into areas which find great Importance in working of any industry. Since students mainly have an mechanical engineering background, with this additional knowledge they have an advantage over their peers in finding a niche in industry. With rapid industrialization but increasing dearth of maintenance engineers, ITMMEC is here to fulfill the need!
COURSES

- Fundamentals of tribology
- Material for tribology
- Noise monitoring and control
- RAM engineering
- Maintenance planning and control
- Diagnostic monitoring and condition based maintenance
- Failure analysis and repair
- Bulk material handling
- Finite element analysis
- Vibration and noise engineering
- Fracture mechanics
- Lubricants
- Corrosion and its control
- Other electives

LAB FACILITIES

- Universal tribometer
- Scanning electron microscope (SEM)
- Transmission electron microscope (TEM)
- Pin-on-disc test rig
- Ferrography
- Laser partial counter
- FFT analyzer
- Lubricant testing
- 3D profilometer
- Noise measurement
- Acoustic emission measurement system
- Vibration monitoring equipment
- Gear noise analyzer
- Ultrasonic flaw detector
- Magnetic particle inspection unit
- Brake Dynamometer
- Goniometer
- Elasto-Hydrodynamic Rig
CONSULTANCY AND RESEARCH PROJECTS

PREVIOUS MTECH PROJECTS

- Condition monitoring of bearings using Thermography and current signature
- Application of acoustic emission for condition monitoring of rotating machines
- RAM studies of a production line, process or systems
- Incorporation of self-lubrication character into near-eutectic Aluminum-Silicon alloy
- Protection of AZ91 alloy against wear and corrosion
- Shock absorber fluid: State of art and performance optimization
- Exploring the lubricity of natural resources for green lubricants
- Tribological investigations of a binary Mg-xZn alloy (x=1 to 6 wt% of Zn)
- Influence of ingredients in friction materials on NVH
- Study on effects of biodiesel on engine health
- Study of miscibility of lubricating oils

CURRENT MTECH PROJECTS

- Condition monitoring of Pump.
- Exploring the cellular compatibilities of ceramic coatings on AZ91 alloy.
- Investigation of brake squeal using material, noise and vibration characterization of the braking system.
- Development of green composite material.
- Pressure die casting of Mg alloys.
- Reliability analysis of mechanical system.
- Condition monitoring of Roller bearings.
- Development and application of sound intensity measurement and analysis programme.
- Tribological studies of Mg-RE composites.
- Prognostic studies of machinery components.
- Polymer composite for dry bearings.
- Fabrication and tribology of REO doped alumina-based composites.
- Exploring role of anon additives into green lubricants.
PAST RECRUITERS

EXON Mobil
Maybank
ONGC
NISSAN
Mercedes-Benz
accenture
IndianOil
Mahindra
BOSCH
TATA MOTORS
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Leading Innovation

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