

INTRODUCTION

Maintenance is a nascent technology which aims to bring about the economical utilization of physical assets. The importance of an effective system of maintenance in an industry need not be over emphasized. Conventional maintenance techniques such as breakdown maintenance and preventive maintenance have their own limitations in detecting the incipient faults at the right moment. Emphasis on reducing maintenance cost and downtime has led to the implementation of Condition Monitoring and is considered as a tool which can quickly identify the problem and recommend appropriate repair action.

Tribology comprises of the science and technology of interacting surfaces in relative motion; that is, friction, lubrication and wear. Condition Monitoring based on wear debris analysis of used oil is considered as a tool which can quickly identify the health of machinery and diagnose the same before breakdown.

Through this course, the Participants will be able to use the best practices for selecting, storing and testing lubricants to boost reliability and generate lasting results in machine equipment, efficiency/ maintenance. They will also gain better understanding of oil analysis, so as to align their efforts with those of maintenance professionals.

COURSE CONTENT

- Introduction to Condition-Based Maintenance (CBM)
- Fundamentals of Tribology
- Role of tribology in machinery maintenance
- Oil Analysis in Condition-Based Maintenance
- Vibration Analysis in Condition-Based Maintenance
- Integration of Oil and Vibration Analysis

- Case Studies and Real-World Applications
- Practical Classes
- Field / Plant Visits

ABOUT IIT(ISM) DHANBAD

The **Indian Institute of Technology (Indian School of Mines), Dhanbad** is a fully residential and co-educational institute situated in the heart of the country's prime coking coal belt, 260 kms from Kolkata with a campus spread over an area of 393 acres, (with 218 acres of existing campus and 175 acres under acquisition and development) the fully residential IIT(ISM) has all the facilities of world class academic institute. What started as an institution to impart mining education has graduated into a full-fledged technical institution of international acclaim offering a host of programmes like B. Tech., M. Tech., M. Sc. Tech., and MBA. In addition the Institute offers M. Phil. and full as well as part time Ph. D. programmes, while also awarding D.Sc. as the highest degree of academic achievement.

DATE and DURATION:

23rd September to 27th September, 2024

INTENDED PARTICIPIANTS

Participants should be practicing engineers from industry, mines and allied fields, Post Graduate Students, Research Scholars, Faculty Members, and Scientists working in the field of Maintenance Engg., Condition monitoring, Hydraulic System and Tribology.

REGISTRATION

External Participants (outside IIT (ISM))	
Post Graduate students/ Research Scholars	Rs. 15,000/-
Faculty members	Rs. 30,000/-
Scientists/practitioners from Industry	Rs 35,000/- (non-resident participant) Rs 40,000/- (residential participant)

- **Extra 18% GST will be charged per participants.**
- **More than 4 participants from a particular industry will get 10% discount from the base amount.**
- **A/C room accommodation at EDC in IIT (ISM) will be provided for residential participant.**
- **Accommodation and dinner will not be available for non-resident participant.**
- **Fooding and lodging shall not be provided to participants from IIT(ISM) and the course fee is as per the IIT (ISM) rules.**

NOMINATION & PAYMENT

Nomination along with course fee in the form of Demand Draft in favor of "**Registrar, Indian Institute of Technology (ISM), Dhanbad-826004**" payable at any bank available in Dhanbad, should reach to Course Coordinator at the address as given above on or before **15.9.2024**. The formal consent for attending the course may be sent in advance through email to the Coordinator.

The details for online transaction (e-payment) of the fee is given below*:

Name of Beneficiary: **IIT ISM Special Fund**
Address: Dhanbad, Jharkhand, Pin:-826004.
Bank Name: Canara Bank
Branch Name: Saraidhela, Dhanbad-828127
MICR Code: 826015003, IFSC code: CNRB0000986

Account no.: 0986101024892
Type of account: Saving
PAN No: AAAAI0686D



COURSE COORDINATOR:

Prof. Subrata Kumar Ghosh
Department of Mechanical Engineering,
Indian Institute of Technology (ISM),
Dhanbad-826004, Phone: 0326 - 2235601,
Mobile: +91- 9430187029, 9264436805
Email: subrata@iitism.ac.in;
subratarkl@gmail.com

***Kindly send a copy of transaction with duly filled registration form to the course coordinator before 15.09.2024.**

Registration Form

**A Short Term Course
on
Condition-Based Maintenance: Integrating
Oil Analysis, Vibration Analysis, and
Tribology
(23rd September to 27th September, 2024)**

1. Name: _____
(Capital Letters with Surname underlined)
2. Organization/Institute: _____

3. Designation/Dept.: _____
4. Qualification: _____
5. Specialization: _____
6. Gender : (M/F) _____
7. Mailing Address: _____
8. Mobile: _____
9. E-mail _____
10. Registration Fee: _____
11. Mode of payment: _____
Amount: _____
DD No./ Transaction ID: _____
Date: _____
Issuing Bank: _____
- SIGNATURE: _____
Date: _____

**A Short Term Course
on**

**Condition-Based Maintenance: Integrating
Oil Analysis, Vibration Analysis, and
Tribology**

(23rd September to 27th September, 2024)

Coordinator

Prof. Subrata Kumar Ghosh



Organized by

**DEPT. OF MECHANICAL
ENGINEERING**

**Indian Institute of Technology (ISM)
Dhanbad– 826004, JHARKHAND
INDIA**