



The Indian Institute of Metals' Short Professional Educational Courses Committee with the leadership of its IIM Kharagpur Chapter is planning to conduct a course on

“Material Failure Analysis- Basics & Practices”
(Course Number IIM-24-104)
27th to 29th May, 2024, 9:00 h to 13:00 h

premature failure. It becomes important to understand whether a component failed as per design or due to unforeseen extraneous reasons. It is essential to understand the root causes that violated the design parameter of the materials. Failure analysis are liability intensive in some industry and immediate resolution to overcome the causative factors are important. Failure analysis validates the specification or enables improvement of the same. Timely resolution of failures in production components enables faster restoration of the line function. Failure analysis also enables redesign and new product development. The overall losses to the institution are minimized, when failures are quickly resolved and the costs associated with material, processes and quality inspection are saved. An effective failure analysis also plays a major role in preventing future catastrophes repeating, thereby saving both human lives and avoiding huge financial losses. Ultimately, the customer gets a standard assured product that improves the reliability of the component in service. In this regard, there is a demand form industry to conduct this course on failure analysis.

Speaker Profile: The faculty of the course consists of the following professors of eminence from IIT, Kharagpur:

1. Prof. Rahul Mitra
2. Prof. Debalay Chakrabarti
3. Prof. Sumantra Mandal
4. Prof. Indrani Sen
5. Prof. Siddhartha Roy
6. Industrial Expert, Dr M Sathya Prasad

The course content would be covered in online mode through electronic media. All registering candidates will get a participation certificate and performance certificate.

Who should attend: The course is useful for practising industry professionals in automotive, steel and aerospace sectors, nuclear and thermal power plants, as well as research and academic professionals, students, and materials scientists from private and Government R&D laboratories. It will help people to be educated in methodology for analysing the nature of failure and its root cause in engineering components during processing or on loading under different conditions.

Course Content:

| Lecture | Title | Lecture | Title |
|---------|--|---------|---|
| 1. | Failure Analysis of Metallic Systems- Why and How (IS) | 74. | Non-destructive testing as a valuable tool for failure analysis in the industry (SR) |
| 2. | The importance of understanding the industrial processing defects to perform failure analysis of engineering components (DC) | 85. | Analysis of failures in engineering components exposed to static and dynamic loading at high temperature (RM) |
| 3. | Environment assisted materials degradation: case studies and associated failure analysis (SM) | 96. | Basics of fatigue and methods to improve component life |

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Registration Fees and Payment Methods

| Participant type | Online Course for 3 days. |
|--------------------|---------------------------|
| IIM Members | 5000 + 900* = 5900 |
| IIM Non Member | 7500 + 1350* = 8850 |
| Student Member | 1000 + 180* = 1180 |
| Student Non-member | 1500 + 270* = 1770 |
| *(18% GST) | |

- Participants may join for the 3 course conducted virtually,
- Advance payment of Registration fees is mandatory
 - Participation fee is non-refundable; however, change in nomination is possible
 - Students may furnish suitable proof of their student status while filling the online form
 - 10% discount shall be offered for registering more than 5 person.
 - Individual Participants are requested to register via <https://shorturl.at/dlGR1> and pay online as per the details below.
 - Organizational Participants (sponsored by organizations) are requested to register via <https://shorturl.at/huAF0> .

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 Chairman, SPECS Committee,
 The Indian Institute of Metals
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Bank Details
A/c name:
 The Indian Institute of Metals
Bank: State Bank of India,
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IFSC Code: SBIN004289
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