

Two-days intensive training on “Basics of metallurgy for engineers”



Date: 22nd – 23rd June, 2018.

Timing: 9:00 am to 6:00 pm.

Venue: Evolve by TCR, 215 Pancham Icon, Nr. D-mart, Vasna Road, Vadodara, Gujarat.

Having a proper appreciation of metallurgy is a must for the professionals working in the functional areas of proposal, engineering, supply chain management, production / execution, quality etc. It is essential for proper selection of materials of construction, process optimization, operation & maintenance practices of the plant.

- Plant Engineers / Managers
- QA / QC Engineers
- Reliability Engineers
- Metallurgical / Materials Engineers
- HAZOP Engineers / Managers
- Other Technical, Laboratory, Sales Personnel, engineer from allied disciplines, management and administrative staff who need a working understanding of metals and their applications.

Course Objective:

- To understand significance and importance of metallurgy in process Industry.
- To evolve systematic properties for material selection based on metallurgical principles.
- To realize the importance of knowledge of metallurgy in fabrication, operation, maintenance and condition monitoring of plant and equipment.
- To develop basic knowledge to conduct or supervise failure investigation & to communicate effectively with metallurgists and other experts.
- To ensure cost saving, increase profitability, safety and reliability through knowledge of metallurgy.
- Material selection based on corrosion behaviour

Course Content:

- Introduction to metallurgy.
- Correlation of properties with composition and microstructure.
- Manufacturing methods casting, rolling, extrusion and forging with defects and its characterization.
- Metallography and interpretation of microstructure.
- Heat treatment of steels and cast iron.
- Nonferrous alloys and heat treatment.
- Mechanical behavior of steels, Welding metallurgy
- Failure analysis of failed component
- Corrosion and its preventions, NDT

Who should attend?

- Engineers of middle management level
- Maintenance / Inspection Engineers
- Process engineers
- NDT Engineers
- Inspectors

Registration:

The course is limited to 25 participants only and participation will be decided on first come first served basis. Interested participants can register by filling attached registration form. The course fee includes participation, course material and stationery. Tea / coffee and working lunch will be served. Participants have to make their own arrangements for accommodation and local conveyance. The course fee is non-refundable. However, in the event of cancellation of training program by TCR for some unavoidable reasons, it will be refunded. TCR accepts the change in nomination.

Course fee:

Single participant: Rs. 10,000.00 for Indian delegates & USD 300 for foreign delegates.
GST @ 18.00 % applicable on above fees.

Payment mode:

Interested participants should mail/ E-mail the registration form along with DD/at par cheque in favour of “**TCR ADVANCED ENGINEERING P LTD.**” at the address mentioned in attached registration form.

Forward your Registration forms to:

Mr. Rajesh, HOD - Training
TCR Advanced Engineering Pvt. Ltd., 250/9 GIDC, Makarpura, Vadodara, Gujarat. Ph: 0265-2657233, 7574805594-96
Email: rajesh@tcradvanced.com
Mobile: +91 7574801050

Registration form can be downloaded from our website:
<http://tcradvanced.com/coursecalendar.php>

For more course details, check our FB page: -
<https://www.facebook.com/EvolveTCR/>

Faculty:

The course will be conducted by renowned experts with vast experience in Metallurgy. Course faculty are:



Mr. Ketan Upadhyay

GM – Reliability Engineering
TCR Advanced

- He has experience of 26 years in field of NDE, Acoustic emission techniques, Vibration measurement and signature analysis, Failure Investigations, microstructure interpretation, Scanning electron microscopy and digital imaging system.

- He is a qualified level II for Acoustic Emission testing (IISC Bangalore), Vibration Analyst VT-II (Entec IRD) and Ultrasonic Flaw Detection (EEC Mumbai) techniques.



Dr. P B Joshi

Ex-Prof & Head of Metallurgical and Materials Engg.
Dept
M S University of Baroda
Consultant, TCR Advanced

- Dr P. B. Joshi is a professor and Ex-head of the department of Metallurgical and Materials Engineering of The Maharaja Sayajirao University of Baroda, Vadodara. He has 33 years of UG & PG teaching and research experience and 5 years industrial experience.

- His areas of interest are physical metallurgy, alloy steels, failure analysis and material selection, material characterization and powder metallurgy. He has more than 70 research papers in journals of national and international repute and national/international conferences/seminars held in India and abroad. He is the author of a book entitled, "Materials for Electrical and Electronic Contacts" published by Science Publishers, USA.



Mr. M. N. Patel

Ex. Associate Professor
Metallurgy & Materials Engg Dept.
Consultant, TCR Advanced

- He has 35 years of teaching experience in UG and PG level in subjects like Plastic Deformation of Metals, Mechanical Metallurgy, NDT and Failure Analysis, Mechanical behaviour of materials, Selection of Materials and Failure Analysis, Physical Metallurgy and Welding Metallurgy.

- He has Published 16 research papers in various national journals in the field of weld ability of steels, corrosion of steels, sensitization of stainless steels and failure analysis.



Mr. Gopul Patel

GM, TCR Advanced

- He has an extensive knowledge of vacuum technology and has worked as Scientific Officer at department of science and technology sponsored research centre.

- He is qualified as NDT level II in M.T., P.T., U.T. and E.T.

- He has experience of various advanced methods of material characterization and has worked extensively in the field of microscopy. He is actively involved in establishing new testing facilities at TCR lab as well as on site.

Key Benefits:

- ✓ Providing delegates with a practical understanding of the use of metals in engineering applications.
- ✓ Understanding as to why metals are so important, what a metal is, the typical life-cycle of metals and providing an overview of the industry.
- ✓ Gaining insight into the scientific principles of metallurgy and how to apply them to specify & process metals in an industrial context.
- ✓ Explaining the properties of metals, how they are tested, how metal products are made and where they are used.
- ✓ Understanding of corrosion, welding and fabrication aspect of metals.

Training Sessions
Topics
Introduction to metallurgy
Correlation of properties with composition and microstructure
Manufacturing methods casting, rolling, extrusion and forging, defects and its characterization
Metallography and interpretation of microstructure.
Heat treatment of steels and cast iron
Nonferrous alloys and heat treatment
Mechanical behaviour of steels
Failure analysis of failed component
Welding metallurgy
Corrosion and its preventions
Non-destructive techniques