



**Date:** 29<sup>th</sup> November, 2019

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

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

**Course specification:**

- Scanning Electron Microscope (SEM) is upcoming as a valuable new tool for the non-destructive inspection, examination and evaluation of materials, both metallic and non-metallic, also assemblies and surfaces. One of the unique advantages of Scanning Electron Microscopy is the fact that many specimens can be examined with minimal specimen preparation activity.
- EDS (Energy Dispersive Spectroscopy) is attached with SEM which is used to analysis the chemical composition of the defects presents in the samples. It can be used to identify composition of corrosion products present on surface and within cracks.

**Topics to be covered:**

- Principles of Scanning Electron Microscope
- Sample Preparation technique for SEM
- Principles of Energy Dispersive Spectroscopy
- Demonstration of SEM with EDS
- Working of SEM with Instrumentation
- Actual study of various defects in components
- Hands-on training with attendee’s samples

**Who should attend?**

- QA/QC Engineers/ Managers from foundries and forging
- R&D Engineers
- Academic Trainers

**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. 6,000.00 for Indian delegates  
USD 170 for Foreign Delegates.  
GST @ 18.00 % applicable on above fees.

**Payment mode:**

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

## Faculty:



**Mr. M. N. Patel**  
**Ex. Associate Professor**  
**Metallurgy & Materials Engg Dept.,**  
**Consultant, TCR Advanced**

He has 34 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.

### **Forward your Registration forms to:**

#### **Mr. Rajesh Lakhnotra**

HOD - Training  
TCR Advanced Engineering Pvt. Ltd., 250/9 GIDC,  
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Registration form can be downloaded from our website:  
<http://tcradvanced.com/coursecalender.php>

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



**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 and 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 lab as well as on site.