

## Two Day Intensive training on “High temperature degradation of industrial component”



**Date:** 6<sup>th</sup> & 7<sup>th</sup> September, 2019

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

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

### Course Contents:

- Introduction to high temperature materials
- Metallurgical factors and process control for high temperature materials
- Damage Mechanisms for High Temperature Components
- Case Studies and Failure Investigation
- Inspection methods for early damage mechanisms to identify on-set of damage mechanisms

### Course fee:

Single participant: Rs. 20,000.00 for Indian delegates & USD 400 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 PVT. LTD.” at the address mentioned in attached registration form.

### Who should attend?

- Engineers of middle management level
- Process Engineers
- Inspection Engineers
- Design Engineers
- Technical Service Engineers
- Reliability Engineers

### 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.

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

**Mr. Rajesh Lakhnotra**, HOD - Training  
TCR Advanced Engineering Pvt. Ltd., 250/9 GIDC, Makarpura,  
Vadodara, Gujarat. Ph: 0265-2657233, 7574805594-96  
Email: [evolve@tcradvanced.com](mailto:evolve@tcradvanced.com)  
Mobile: +91 7574801050

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/>

## Faculty:



**Mr. Paresh Haribhakti**  
MD, TCR Advanced

Authored the book titled as “Failure Investigation of Boiler Tubes”.

He has over two decades of experience in the field of metallography and microstructure examination and has solved more than 3000 industrial problems. He is pioneer in promoting in situ-metallography.

- Solved materials engineering problems and performed failure analysis on components from petrochemical plants, oil and gas transmission pipelines, offshore structures, ships, pharmaceutical plants, food processing equipment, gas turbine engine components, and weldments.



**B.K. Shah**  
EX-Head,  
Quality Assurance Division,  
BARC

- Shri B.K. Shah has done B.Sc. Eng. (Metallurgy) from Regional Institute of Technology (RIT), Jamshedpur (First Class with Distinction- 1st Rank) and MTech. (Corrosion Sc. & Eng.) from Indian Institute of Technology (IIT), Bombay (CPI 10.0- 1st Rank). He joined BARC in 1973(17th batch of BARC Training School). He has been outstanding scientist of the department of Atomic energy. He retired as head, Quality assurance division, BARC on 31st December 2011. Presently, he is Raja Ramanan Fellow at BARC, Mumbai.

His field of work includes:

- Quality assurance in the manufacture of nuclear fuel & reactor core components
- Material characterization & corrosion monitoring by NDT
- Metallurgical failure analysis
- In-service inspection
- Corrosion studies on reactor materials
- NDT education & training



**Dr. P B Joshi**  
Professor  
Metallurgical & materials MSU- Baroda  
Consultant, TCR Advanced

Authored the book titled as “Failure Investigation of Boiler Tubes”.

Dr. P B Joshi is a professor in department of metallurgical and materials engineering, Faculty of technology and engineering, Maharaja Sayajirao University, Vadodara. He is a Ph. D. in material engineering.

- Dr Joshi is having more than 25 years of teaching experience in the field of metallurgy. He has more than 50 research publications in international journals & national journals, and authored a book titled “Materials for Electrical and Electronic Contacts”.



**Mr. Ketan Upadhyay**  
GM – Reliability Engineering  
TCR Advanced

- He has experience of 26 years in the 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.



**Mr. Hemant Pradhan**  
Consultant, TCR Advanced

- He is a Mechanical Engineer with over 35 years of experience in design, detail engineering services, projects, inspection, mechanical construction, procurement, estimation etc. for fertilizer and petrochemical plants and projects.
- His major experience field has been design, detailed engineering, trouble shooting of fertilizer plants like ammonia, urea, DAP, ASP, AS, phosphoric acid, sulphuric acid etc.; petrochemical plants like Caprolactam, Melamine, Nylon-6, and utility/co-generation/ boiler, water treatment plants.
- He has participated in design conferences at international and national level with process licensors/ detail engineering firms like M/s Enco, Switzerland; M/s INCRO SA, Spain; Tunisian Joint Venture, Tunisia; M/s Schmidt & Clemens, Germany M/s Davy Powergas, M/s Uhde, M/s Linde, at India.