TCR ADVANCED

EVOLVE by TCR
Innovate your skillset, Empower the mind

Two-Day Training Programme on Industrial Fired Heaters: Inspection, Remaining Life Assesment, FFS and Failure Investigation

18th & 19th December 2025

Evolve by TCR
215, Pancham Icon,
Vasna Road, near D-Mart,
Vadodara, Gujarat 390007

Fees: INR 20,000/- for single person + GST 18% extra.

10% Discount on total amount of invoice for 03 or more nominations from the same organization.

Course Content

- Introduction to materials of construction in fired heaters.
- Damage mechanisms governing remaining life and failures in fired heaters.
- Fundamentals of accelerated creep rupture test, creep damage accumulation (API 530), and the Omega method of API 579/ASME FFS-1.
- Remaining Life and Fitness for service Assessment for fired heaters.
- Failure Investigation of fired heater coils.
- Inspection of the fire heaters.

Who Should Attend

- Maintenance Managers/Engineers
- Mechanical Managers/Engineers
- Inspection & Reliability Managers/Engineers
- Plant Managers
- Asset Integrity Managers
- Safety Officers
- Technical Consultants

Objectives of the Training Programme:

- **Understand Materials Used in Fired Heaters:** Gain a clear understanding of the construction materials used in industrial fired heaters and their behavior under high-temperature operating conditions.
- **Recognize Life-Limiting Damage Mechanisms:** Identify and comprehend key damage mechanisms such as high-temperature corrosion, creep, choking, carburization, and fatigue that contribute to deterioration and failure.
- **Conduct Effective Inspections Aligned with Operational Guidelines:** Develop awareness of inspection practices and strategies to detect early signs of damage, aligned with industry standards and plant operational requirements.
- **Evaluate Heater Condition Through Fitness-for-Service Assessment:** Learn the methodologies for assessing the operational condition of fired heaters and determining their continued suitability for service.
- **Perform Remaining Life and Degradation Assessments:** Understand the principles of accelerated testing, creep damage analysis, and techniques such as the Omega Method for predicting remaining life.

Meet The Faculty

Mr. Paresh Haribhakti, MD

- He holds a post-graduate degree in Materials Technology from M.S. University, providing him with a solid academic foundation in metallurgy and materials science. With a leadership role at TCR Advanced Engineering Services, he has accumulated extensive experience in metallurgical engineering, and has solved over 9000+ industrial challenges. He is expert in risk mitigation and management.
- Paresh has authored 'Failure Investigation of Boiler Tubes: A Comprehensive Approach', published by ASM International, USA. He passionately advocates for eliminating failures across industries and working towards predicative approach. His commitment to advancing knowledge and expertise is evident through his active participation in global conferences and contributions to leading metallurgical journals. He is an acclaimed expert for damage mechanism of oil & gas, refinery, petrochemicals, power, fertilizers.

Mr. M.N. Patel

- BE & ME in Metallurgy. Has 33 years of teaching experience in UG and PG level in subjects like Plastic Deformation of Metals, Mechanical Metallurgy, NDT and Failure Analysis, Mechanical behavior of materials, Selection of Materials and Failure Analysis, Physical Metallurgy and Welding Metallurgy.
- He holds expertise in physical metallurgy, micro structural analysis, scanning electron microscopy, welding metallurgy, failure analysis.

Mr. Ketan Upadhyaya

- BE in Metallurgical engineering, PGD in computer science. He has experience of 25 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. He has expertise in Engineering Critical Analysis, high-temperature degradation of materials, Remaining Life Assessment (RLA), and Fitness-for-Service (FFS) evaluations. He has investigated over 1,000 failure cases related to petrochemical and oil & gas plants.

Mr. Nikhil Sabhaya

- He is a post graduate in Metallurgy. He has over 5 years of hands-on industrial experience in the field of Boiler Remaining Life Assessment (RLA) and Non-Destructive Testing (NDT). He is an ASNT Level III certified professional in ET, UT, PT , and MT. Additionally, he holds API 510 certification as a Pressure Vessel Inspector and is a CSWIP 3.1 Certified Welding Inspector. His deep practical experience, combined with his knowledge of various national and international codes and standards, enables him to effectively formulate and validate test procedures for diverse NDT applications.
- He has working experience in NDT testing at various Power projects, Petrochemicals, Refineries, Structural and Automobile Industries. He has an expertise in NDT and the application of various NDT methods for solving problems of Industry.

For NFET/ RTGS/ Bank transfer:

Account No: 05730400000034
IFSC: BARB0INDMAK (5th letter is zero)
Bank: BOB, Makarpura Branch
Merchant Name: TCR ADVANCED ENGINEERING PVT LTD
UPI ID : tcrad93762@barodampay

QR code for payment

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