



**2 DAY -
INTENSIVE TRAINING**
on "Hydrotreating/cracking
Reactor Effluent Air Cooler" (REAC)


**Damage Mechanisms
Corrosion
Fitness For Service
Inspection**

28th Feb'20 - 29th Feb'20
Friday - Saturday



EVOLVE by **TR**

Innovate your skillset. Empower the mind

 215 Pancham Icon, Vasma, Vadodara, Gujarat, 390007

TWO - DAY INTENSIVE TRAINING

The uncertainty in the reliability of REAC has raised concerns for refinery's safety and the company's stakeholders.

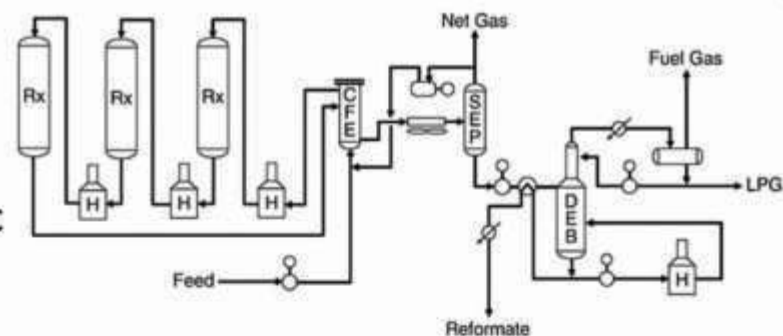
The Reactor Effluent Air Cooler (REAC) is an essential part of hydrotreating/cracking units; any hindrance to its operation will impact the refinery. In recent times, the crude oil quality is laden with sulfur and nitrogen that creates vulnerability for its complex operation that can lead to various failures. The distinctive design of a square box poses challenges in manufacturing along with inspection when put into service. With the modern approach of Fitness For Service as well as Damage Mechanisms, it is possible to predict the vulnerability of problems & assessments and can be made to predict its behaviour for increasing the reliability.

COURSE OBJECTIVES

- Learn the Importance and Working of REAC in a Hydro Unit
- Elucidate the Consequences of processing of crude oil laden with sulfur and nitrogen
- Illuminate the possibility of a fire accident occurring in REAC due to its failure
- Illustrate the various damage mechanisms and failure analysis in the form of case studies
- Learn the preventive approach

COURSE CONTENT

- Role of REAC in Hydrotreating/cracking
- Materials for REAC tubes and header
- Design consideration for REAC
- Role of NACE material certification and testing
- Current standards and its role
- Operational aspect and water injection for REAC
- Damage mechanisms and mitigation
- Inspection during fabrication and in-service
- Failure investigation of REAC components
- Fitness for service assessment
- NDT methods & limitations for REAC application
- Improving the reliability based on present condition



KEY BENEFITS

- Develop a perception on Failure Mechanisms due to cracking of REAC Duplex Steel
- Understand the Importance of stringent quality control during fabrication of REAC
- Develop a comprehension on risk assessment due to variation in crude oil quality and operating parameters
- Improve reliability

COURSE FEES

Individual Candidate: Rs. 35,000.00 (Indian delegates) & USD 600.00 (Foreign delegates)

GST: 18.00 % applicable on above fees

10% discount if more than two participants are from the same organization.

REGISTRATION

The course is limited to 25 participants and participation will be selected on first come first serve basis, interested participants can register by completing the attached form.

The course fee includes participation, course material and stationery. Tea / coffee and working lunch will be served.

Participants will arrange for their accommodation and local conveyance.

The course fee is non-refundable, however, in the event of cancellation by "Evolve by TCR", it will be refunded.

Change in Nomination is accepted by "Evolve by TCR"

Registration form can be downloaded from: <http://tcradvanced.com/coursecalender.php>
For more course details, check our FB page:- <https://www.facebook.com/EvolveTCR/>

PAYMENT MODE

Email/Mail the attached form with Demand Draft/At par cheque in favor of "TCR Advanced Engineering Pvt. Ltd."

Address:

TCR Advanced Engineering Pvt. Ltd.
250/9 GIDC, Makarpura,
Vadodara, Gujarat 390010

Phone: +91 7574801050

Email: evolve@tcradvanced.com

Electronic payment by NEFT/RTGS

Bank Information

Account name:

TCR ADVANCED ENGINEERING PVT. LTD.

Bank account number: 05730400000034,

ISFC/RTGS code: BARBOINDMAK

Bank name & Address: BANK OF BARODA,
SSI BRANCH, GIDC,
MAKARPURA,
VADODARA,
GUJARAT, 390010

For more information, please contact:

Mr. Rajesh Lakhnotra,
Head Of Department – Training

Email: rajesh@tcradvanced.com

Phone: +91 7046883691



Paresh Haribhakti

With an experience of 29 years in metallography and microstructure, Paresh Haribhakti has solved more than 5000 industrial issues. Being the pioneer in the field of in-situ metallography and Materials engineering, he has an expertise in petrochemical plants, oil and gas transmission pipelines, offshore structures, ships, pharmaceutical plants, food processing equipment, gas turbine engine components and weldments.

Dr. V. R. Krishnan

Is a distinguished professional in the field of Materials Technology. With a Bachelor's Degree in Metallurgy and Master's Degree in Industrial Metallurgy from IIT Madras, he has a Doctorate in Mechanical Engineering from IIT Delhi specializing in Underwater Welding. An immensely rich professional working experience as a Specialist in Material Selection, Material Processing, Materials Performance, Corrosion, Welding, Fabrication, Quality Assurance, Integrity Analysis, Fitness For Purpose, Residual Life Analysis (RLA), Certification and Trouble Shooting has made Dr. Krishnan an expert in metallurgy.

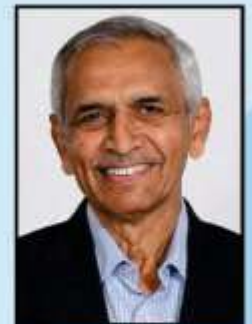


Mr. Hemant Pradhan

Is a Mechanical Engineer with 34 years of experience in design, detail-engineering services, projects, inspection, mechanical construction, procurement and estimation for fertilizer and petrochemical plants and projects. His major experience field has been design, detailed engineering, trouble shooting of fertilizer plants, petrochemical plants and utility/co-generation/ boiler, water treatment plants. He is also involved in engineering jobs for installing new projects, de-bottlenecking, capacity augmentation, plant modifications, addition of new sections; trouble shooting; estimation; procurement; inspection for more than 30 years.

Dr. P. B. Joshi

Is an ex-professor of Metallurgical and Materials Engineering, Faculty of Technology and Engineering, Maharaja Sayajirao University, Vadodara. He is a Ph. D. in Materials 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

With an experience of 26 years in correlation of properties with composition and microstructure, Ketan Upadhyay has become an expert in manufacturing methods like casting, rolling, extrusion and forging defects. Mechanical behaviour of steel, failure analysis, Welding metallurgy as well as non-destructive technology is his passion. Ketan Upadhyay is a qualified level II for Acoustic Emission Testing (IISC, Bangalore), Vibration Analyst VT-II (Entec IRD) and Ultrasonic Flaw Detection (EEC, Mumbai).

Mr. Sandeep Singh

Is qualified as NDT Level III in in M.T., P.T., U.T., R.T. and E.T. He is conversant with various codes such as ASME (Sec V, Sec VIII, Sec IX, ASME B31.1, B313.3, code case 2235), API 653, structural BS codes etc. With 5 Years of experience in NDT and Quality Control at various Power projects, Petrochemicals, Refineries, Structural and Automobile Industries, Sandeep Singh is an expert in the field of Non-Destructive Testing.

