



Proper training of plant personnel supports optimal plant operation, capacity, and productivity, improves output quality and worker safety, reduces the likelihood and severity of plant and machinery downtime, and significantly pares overall operating costs. All XRG Technologies training courses provide relevant examples and case studies, further reinforcing the practical and real-world scenarios found in the work environment.



THE BEST WAY TO DEAL WITH A PROBLEM IS TO PREVENT IT.

ETHYLENE TRAINING COURSE

SECTION 1 COURSE CONTENT

- Cracking Furnace Introduction
- Introduction to Fired Heaters
- Fundamentals of Cracking
- Radiant Coil Design
- Transfer Line Exchangers
- Coke Formation

SECTION 2 COURSE CONTENT

- Decoking
- Fired Heater Mechanical Considerations
- Fired Heater Process Design
- Coil Metallurgy & Damage Mechanisms
- Combustion and Burners

SECTION 3 COURSE CONTENT

- Cracking Furnace Combustion Design
- Heat Flux Profile Considerations
- Operations Best Practices
- Auxiliary Equipment
 - Safety Systems and BMS
 - Maintenance and Troubleshooting
 - Computational Fluid Dynamics

**A CUSTOMIZED
TRAINING PROGRAM THAT
PAYS FOR ITSELF.**

ON SITE EXPERT-LED TRAINING WITH REAL-WORLD PRACTICAL APPLICATION

ABOUT THE INSTRUCTOR

This course will be taught by industry experts with comprehensive knowledge of the latest developments and best practices. The main course instructor has extensive experience designing combustion and pyrolysis heater technology as well as modeling cracking furnaces using computational fluid dynamics. His industry experience includes operation, maintenance and best practice responsibilities overseeing 120 cracking furnaces at 8 operational facilities worldwide.

ABOUT THE COURSE

This course will provide the basic knowledge required for understanding pyrolysis furnaces used in the production of ethylene. Contact us for customized content for your specific facility. The course provides a knowledge base for the novice engineer while offering a good review and new insights for the experienced engineer.

DESIGNED FOR

Production and processing operations, mechanical and instrumentation engineers, supervisors and managers, as well as process and project engineering personnel requiring a broad introduction to pyrolysis furnace design fundamentals, operation and maintenance, including a focus on safety, reliability and performance excellence.

YOU WILL LEARN

Students will gain knowledge on fired heater basics with a strong focus on pyrolysis heaters including the basic chemistry, cracking parameters, key design considerations, coil types and metallurgy, combustion systems, process control and monitoring, coking mechanisms as well as decoking techniques and troubleshooting. After the course, attendees will be able to determine optimal operating conditions, improve heater efficiency, decrease heater downtimes and troubleshoot issues in the field.