TECHNICAL
EDUCATION
ACADEMY

School of Engineering

COURSE PROGRAMME

000530

Corrosion awareness for rotating and surface equipment

The phenomenon of construction materials corrosion is one of the causes of industrial equipment and components ageing and damage.



Learn from the Best in the Business!

Course overview

Foundation level

Why take this course

The phenomenon of construction materials corrosion is one of the causes of industrial equipment and components ageing and damage. Corrosion took the very big portion from total cost of ownership and maintenance cost.

This course covers a basic review of corrosion and the methods by which corrosion is identified, monitored, and controlled.

This course is mainly based on the American API, ASME and ASTM standards, as well on European Directives and International norms.

Who it is for and how it helps

This course is recommended for anyone who needs the ability to recognize corrosion and understand its devastating potential, and how to monitor and control corrosion, especially as it relates to his or her area of responsibility.

These attendees include:

- Maintenance personnel
- Process and Operations personnel
- Laboratory Services employees
- Inspectors
- Integrity and Reliability engineers
- Purchase and Salespersons

What you will learn

- Define what is meant by corrosion, oxidation and reduction reactions, thermodynamics, kinetics, and passivity
- Identify the characteristics of typically encountered in oil and gas corrosive environments
- Distinguish between engineering materials such as metals, non-metals, composites, concrete and ceramics and their relationship to corrosion
- Understand rotating and static equipment characteristics and their specific corrosion
- Identify corrosion monitoring laboratory and industrial methods, modeling and prediction techniques
- Understand corrosion prevention activity, from materials selection to repair
- Understand corrosion management system
- Describe safety measures and environment protection
- Recognize the economic, environmental and safety impact of corrosion

Curriculum

Modules 01–05

01 Fundamentals of corrosion process

- Types of metal corrosion
- Corrosion-aggressive environment
- Non-metal corrosion
- Technical and economical consequences of corrosion

02 Process equipment in oil and gas industry

- Rotating equipment characteristics
- Rotating equipment specific corrosion
- Static equipment characteristics
- Static equipment specific corrosion

03 Corrosion monitoring

- Laboratory methods
- Industrial methods
- Modeling and prediction of corrosion
- Computer software and artificial intellect

04 Corrosion prevention

- Resistant materials selection
- Protective coatings
- Inhibitors
- Electro-chemical protection
- Corrosion damage repair

05 Corrosion management system

- Integrity Operating Windows
- Fitness for Service
- Risk evaluation and management

Curriculum

Modules 06

06 Safety measures and environment protection

- International organizations for corrosion problems
- Norms for labour and environment protection
- Harmful and dangerous process factors
- Hazardous materials marking
- Fire safety

Joining the programme

Contact the Academy and quote course code 000530 to confirm dates, delivery format, prices and enrolment terms.

Training for your team

Tell us your business goals, the roles and number of participants, and your preferred dates and location. This will help us discuss the right training option.

Preparing for the programme

The published programme does not specify any prerequisites. Contact us before enrolling to confirm how to prepare.

Discuss your training needs

mail@tecedu.org
www.tecedu.academy

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