Material Selection and Corrosion Control in Petrochemical Industries

03-07 December, 2016
Tehran-Iran

Limited Attendees
The course has limited seats to ensure maximum learning and experience for all delegates.

Interactive Training
You will be attending training designed to share both the latest knowledge and Practical experience through interactive sessions. This will provide you with a deeper and more long-term understanding of your current issues.

PRINCIPAL COURSE INSTRUCTOR:

Dr. M. S. Parvizi
PhD, FIM3, FiCorr, CEng, NACE Corrosion Specialist, More than 36 Years of Experience in Material and Corrosion Control, and Authorized International NACE Instructor

Register at: www.matgroup.org | +9821-88553230 | training@matgroup.org
**Course objectives:**
The purpose of this course is to provide the attendees with an overview of corrosion concerns in downstream Oil & Gas industries specific to refinery process units. It aims to identify and examine corrosion and metallurgical failures that may occur in any process and utility units within the refinery. The attendees will have an opportunity to examine techniques and practices that can be used to control corrosion.

**On completion of this course the attendees will be able to know as a minimum:**
- Develop a comprehensive understanding of Materials Selection and Corrosion Control strategy in the downstream Oil and Gas industries
- Describe techniques that can be utilised for mitigation of each mechanism of corrosion
- Identify and define the dominating categories of Refining Corrosion.
- Identify plants areas susceptible to high-temperature threat and materials that can be used for prevention.
- Identify and explain mechanical failure that may occur in equipment and utilise appropriate techniques for prevention.
- Describe additional types of corrosion occurs in utility units of petrochemical plants.
- Identify the influential parameters in corrosion processes of each unit.

**COURSE OUTLINES:**

**Day 1:**
- Assessment test of the attendees’ knowledge of basic corrosion and materials engineering.
- Introduction to materials classification
- A basic background on Corrosion Control Techniques
- Low temperature, High temperature Corrosion and other failure Mechanisms specific to Oil and gas Industries.
- Sour Service Failures mechanisms and interpretation of applicable standards i.e. NACE MR0175/ISO 15156 and NACE MR0103.
- Corrosion Control Concerns on Oil, Gas, and Water Transmission Pipelines
Day 2

Materials selection and corrosion aspects on the following units:
- Forms of Corrosion in Petrochemical Industries
- Corrosion Under Insulation
- Causes of Pipeline Corrosion
- Metallurgically Influenced Corrosion
- Mechanically Assisted Degradation

Day 3

Materials selection and corrosion aspects on the following units:
- Control of Environment variables in cooling water systems
- Amine Treating Units
- Sulphur Recovery Units
- Corrosion by Chlorine, Alkalis, Hypochlorite and Ammonia
- Corrosion by sulfuric, phosphoric, Nitric, HF, Hydrochloric and Organic Acids

Day 4

- Continuation of Acid Corrosion.
- Materials of Construction for Downstream Applications
- Inspection methods and Corrosion Monitoring Techniques in Petrochemical plants: A few case studies
- Failure Analysis techniques in downstream Oil and Gas industries
- Applicable International standards

Day 5

- Role of Materials & Corrosion Engineer in phases of project
- Discussion and exchange of ideas
- Final examination covering the main course contents taught.

PAYMENT, CANCELATION & REFUND POLICIES:

All payments must be received prior to course commencement. Payments are accepted in the form of bank cheque or bank transfer. Cancellation requests by applicants should be in writing and received 30 days before the commencement of course, for the course fee to be refunded minus registration/administration cost of Rials 3,000,000. Cancellations must be made in writing. No refunds will be made for cancellations received less than 30 days before the start of the course. Enrollment is not automatically cancelled if participant does not show up. A substitute participant may be nominated upon approval of MAT Group.

MAT Group reserves the right to withdraw or postpone a course if the number of participants is not sufficient, up to three weeks prior to the course starting date. If a course is cancelled by MAT Group, you will receive notice by email or fax. A full refund of paid registration fees will be given or can be transferred to another MAT Group public course within 12 months (date of registration) of equal cost. Please keep our registration and cancellation polices in mind when arranging your travel as MAT Group does not accept liability for any costs incurred for cancellation or change of travel or hotel reservations.
WHO SHOULD ATTEND:

This course is designed for engineers engaged in the day to day operation and inspection of refinery. It includes, but not limited to, Corrosion and inspection engineers, Equipment, Process, mechanical, inspection and metallurgical engineers, integrity managers, project engineers and all discipline engineers and technologists who are involved with hydrocarbon production, processing, safety and commissioning. In addition, manufacturers of equipment, suppliers of material to this industry will also benefit attending this course.

3 Easy Ways to register:

Online: www.matgroup.org
Email: training@matgroup.org
Fax: +9821-88552734

CONTAC US:

Unit#3, No.26, 3rd Alley, Vozara Ave, Tehran 1513634114 Iran
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Course Speaker:

Sadegh Parvizi has over 36 years’ experience in Oil, Gas, Refineries, Petrochemical, Power industries and Manufacturing Plants. His particular expertise includes materials evaluation as well as integrity management, remnant life assessment and implementation of corrosion control techniques in these industries. He has been actively engaged in investigating and advising on various technical problems, such as selection of materials, optimization of their use, plant failure investigation, Welding/NDT review, CP design review, and technical advice on repair procedure, auditing, writing materials specification. He has been involved in technical clarification activities with the manufacturers on a numbers of projects. He has been involved in a large number of projects world-wide ranging from the conceptual stage to commissioning and production. He has played an important part in troubleshooting of some major production plants.

Sadegh Parvizi graduated from department of the Metallurgy and Materials Engineering at Sharif (ex-Aryamehr) University of Technology in Tehran 1976. He has an MSC in Materials Engineering and a PhD and Postdoctoral degree in Materials Science and Technology from the University of Surrey, UK. His professional career has been sectioned into three distinctive areas as follows:

- Research and Development: Working in International Copper Research Association (INCRA), USA on alloy development projects, Electrical Research Association (ERA), UK on metallurgical behavior of materials at high temperature. In British gas on the effect of natural gas contaminants on the material performance and leading the department of R&D in National Petrochemical Complexes (NPC) of Iran.

- Oil & Gas Operating Companies: British Gas, UK, ADMA-OPCO, UAE, Occidental Petroleum of Qatar and Consultant to Exxon Mobil for Chemical plants in Singapore.

- Engineering Companies: Working with major international Engineering companies such as Technip, Bechtel, and Foster-Wheeler and, at present, working for CB&I (Chicago Bridge and Iron) as a head of Materials Technology Group.

Sadegh Parvizi is an active fellow member of the Institute of Materials, NACE International and Chartered Engineer. He is an approved instructor of NACE in Refining Industries.

Dr.Parvizi has lectured on a number of occasions for researchers, engineers and operators. He has developed a dynamic mechanism on the interaction of different disciplines in projects set-up. He has published and presented a number of papers internationally and has been a key speaker at several Corrosion Conferences.