

CORROSION & FOULING MANAGEMENT



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TRAINING TITLE

CORROSION & FOULING MANAGEMENT

VENUE

Dubai, UAE

DURATION

5 Days

DATES

04 - 08 April 2021

PRICE

US\$4,000 per attendee including training material/handouts, morning/afternoon coffee breaks and Lunch buffet.

TRAINING INTRODUCTION

Corrosion and fouling problems occur in the petroleum refinery in various processes and operations. The magnitude of a petroleum refinery unit and the complex of the processes are such that a wide variety of equipment types can be subject to corrosion and fouling depending on the process. Some refinery equipment types are more vulnerable to corrosion and fouling, than others usually due to their role in the process. Uncontrolled corrosion in petroleum refineries can cause release of hazardous substances and components or can reduce both the performance and reliability of equipment until their failure. As such, corrosion hazards can put at risk the safety and well-being of plant employees and the general public as well as lead to severe damage of process units, and in some cases shutdown of refinery operations.

In petroleum refineries, many processes are subject to problems with heavy fouling that affect overall plant performance and profitability. Operating costs associated with fouling in refinery heat exchangers typically include increased fuel needs, increased pumping power, and reduced throughput and capacity of produced products. Estimates have been made of fouling costs, due primarily to wasted energy

caused by excessive fuel use, that are as high as 0.25% of the gross national product of the industrialized countries.

TRAINING OBJECTIVES

Upon successful completion of this course, the delegates will be able to:

- ✓ Identify common refinery corrosion and fouling problems, including where they typically occur.
- ✓ Describe the type of corrosion or fouling that is present based on location, process conditions, and symptoms
- ✓ Identify control strategies for common corrosion and fouling problems, including their benefits and liabilities
- ✓ Use problem-solving techniques to resolve corrosion problems
- ✓ Apply knowledge of corrosion and fouling management to solve less common problems.

TRAINING AUDIENCE

Refinery engineers, technologists, operators, inspectors, corrosion professionals and chemists.

TRAINING OUTLINE

DAY 1

- Significance of corrosion & fouling petroleum refining industry
- Refinery feedstock
- Refinery products
- Refinery processes
- Refinery equipment
- Metallurgy of refinery specific process equipment

DAY 2

- Introduction to corrosion fundamentals
- Forms of corrosion
- Corrosion of refinery specific equipment
- Damage mechanisms
- Group discussion -Applicable API 579 standard for damage mechanisms

DAY 3

- Introduction to fouling
- Types of fouling
- Fouling influencing factors
- Fouling diagnosis
- Refinery specific process unit fouling problems
- Case Study-Refinery fouling problem

DAY 4

- Refinery corrosion inhibitors injection in specific process units
- Refinery corrosion monitoring in specific process units
- Group Discussion-Applicable NACE standards for weight loss coupons
- Case Study-Refinery corrosion monitoring

DAY 5

- Refinery fouling detection and monitoring in specific process units
- Refinery fouling mitigation control and removal in specific process units
- Fouling control by chemical treatment (antifoulants)
- Mechanical methods for fouling removal

- Chemical cleaning
- Environmental and safety impact

TRAINING CERTIFICATE

MAESTRO CONSULTANTS Certificate of Completion for delegates who attend and complete the training course

METHODOLOGY

Our courses are highly interactive, typically taking a case study approach that we have found to be an effective method of fostering discussions and transferring knowledge. Participants will learn by active participation during the program through the use of individual exercises, questionnaires, team exercises, training videos and discussions of “real life” issues in their organizations.

The material has been designed to enable delegates to apply all of the material with immediate effect back in the workplace.