

**TRAINING TITLE**

**ADVANCED REFINERY INSPECTION**

**Training Duration**

5 days

**Training Venue and Dates**

RE070	Advanced Refinery Inspection	5	15-19 Sep. 2025	\$6,000	Istanbul, Turkey
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In any of the 4 or 5-star hotels. The exact venue will be informed later.

**Training Fees**

- \$6,000 per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Lunch

**Training Certificate**

Define Management Consultancy & Training Certificate of course completion will be issued to all attendees.

**TRAINING WORKSHOP DESCRIPTION**

This course provides a comprehensive coverage of the different process units & facility designs according to their function and relevant various damage mechanisms and how to prepare proper suitable inspection plans and discuss how to identify unit's specific problems and relevant proposed solutions and prepare risk-based inspection for such facilities through planning for it.

**TRAINING OBJECTIVES:**

**Upon the successful completion of this course, each participant will be able to:**

- Compare and contrast Refinery Process unit designs.
- Discuss unit damage mechanisms.
- List the key steps in the inspection planning process
- Identify unit-specific problems and describe typical solutions
- Ability to participate in RBI Workshops.
- Ability to prepare inspection task plans as an out of RBI Workshops.

**WHO SHOULD ATTEND?**

This course is suitable for the following audience:

1. Inspection of corporate staff
2. Corrosion of corporate staff
3. Maintenance of corporate staff

DMCT/OL/9/18(Rev3Dt:23/9/18)

## TRAINING METHODOLOGY

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions and motivating everybody to find the right answers. You will also be encouraged to raise your questions and to share in the development of the right answers using your analysis and experiences. Tests of the multiple-choice type will be made available daily to examine the effectiveness of delivering the course.

Very useful Course Materials will be given.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Group Work & Practical Exercises
- 20% Videos & General Discussions

## COURSE OUTLINE

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

### Module 1:

1. Comparison & contrast of various designs of refinery units & facilities
  - a. What is the refinery?
  - b. What are the supporting process units in the refinery?
  - c. What is the offsite refinery?
  - d. What are the five types of refinery processes?
2. Damage mechanisms of refineries facilities (API 571)
  - a. Mechanical and Metallurgical Failure Mechanisms
  - b. Uniform or Localized Loss of Thickness
  - c. High Temperature Corrosion [ $>400^{\circ}\text{F}$  ( $204^{\circ}\text{C}$ )]
  - d. Environment – Assisted Cracking

### Module 2

1. Key steps of the inspection planning process (API 510)
  - a. Development of an Inspection Plan
  - b. Minimum Contents of an Inspection Plan
  - c. Additional Contents of an Inspection Plan

### Module 3

2. Units specific problems & describes relevant typical solutions identification

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- a. What challenge does refining face?
  - b. How safe is refining
  - c. Process safety improvement
3. RBI (API 580/581)
- a. Principles of Risk Assessment
  - b. RBI planning
  - c. Probability, Consequence, and RISK
  - d. Risk management
  - e. Qualitative VS Quantitative RBI
  - f. Inspection planning as per RBI results
  - g. Case study

**Module 4**

RBI (API 580/581)

- d. Risk management
- e. Qualitative VS Quantitative RBI
- f. Inspection planning as per RBI results
- g. RBI reassessment
- h. Roles, Responsibilities, Training, and Qualifications
- i. Case study

NOTE:

Pre & Post Tests will be conducted.

Case Studies, Group Exercises, Group Discussions, Last Day Review, and assessments will be carried out.

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