



API 570 **DASH D** Inspectorate Pvt. Ltd

7 Piping Inspector 7 Days Training Course

Course Description

This course gives a broad knowledge about “In-Service Piping Systems” and prepares students for the API 570 Exam. The course is an intensive one-week course with a Special emphasis on the use of the related codes and Calculations.

This course content includes:

- ◆ API 570 ◆ API 571 ◆ API 574 ◆ API 577 ◆ API 578
- ◆ ASME B31.3 ◆ ASME B16.5
- ◆ ASME Section IX ◆ ASME Sec V

Class Participants

Students should have 3 years of experience at a petrochemical or industrial facility and have at least 1 year of inspection experience.

However, participants who do not meet this requirement are also welcomed to attend this Training to further their knowledge in the related areas.

Class Participants

The scheduled dates for API 570 Inspector Certification Examination is as below:

Course Description

The course provides participants with the knowledge necessary to:

- ◆ Successfully pass the API 570 piping inspector certification exam
- ◆ Effectively use major codes: ASME B16.5 & B31.3; ASME B&PV Sections V & IX
- ◆ Perform all basic piping calculations needed for the API exam (e.g. tmin, test pressure, MAWP, MDMT, corrosion rates, remaining life, etc.)
- ◆ Use API’s requirements during inspection, repairs, and alterations of piping
- ◆ Review welding procedures (WPS/PQR) and welder performance qualifications (WPQ)

Notes

This is an intense course with daily homework and a final exam (similar to the API 570 exam). A study guide is issued to direct participant’s pre-class study.

Who should join

Piping inspection engineers and managers, Inspection personnel, plant operating engineers and managers, who wish to appear for API 570 examination. Maintenance engineers and technicians and people involved in trouble shooting of plant operations.

Bring to Class

Students should bring to class: a calculator, a straight edge (or triangle), pencils, highlighters, lots of questions, and a “CAN-DO” attitude. Also, participants must bring the appropriate codes required for the API exam.

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Tentative training schedule

DAY 1

1) Welcome & Introduction

2) ASME B16.5 – Flange Code

Learn how to determine:

- ◆ Maximum Flange Pressure
- ◆ Maximum Flange Temperature
- ◆ Appropriate Flange Class
- ◆ Maximum Hydrotest Pressure
- ◆ Flange Dimensions
- ◆ Maximum allowed Flaw Size on Flange Face

3) API 570 Sections 1-4, 6

- ◆ Purpose of API 570
- ◆ Scope of API 570
- ◆ Responsibilities defined in API 570
- ◆ Inspection Types & Intervals
- ◆ Tips on how to memorize information in API Codes

Evening Session: ASME B16.5 & API 570 Homework
Practice all Calculations covered in Class.

- ◆ Question and Answer session

DAY 2

1) ASME B31.3 - Piping Code

Includes understanding:

- ◆ Purpose & Scope of the Code
- ◆ Organization of the Code
- ◆ Piping Classes specified by the Code
- ◆ Roles specified by the Code
- ◆ Tips on how to find information in the Code

2) ASME B31.3 – Calculations & Charts

Learn how to determine:

- ◆ Quality Factor – “E”
- ◆ Allowable Stress – “S”
- ◆ Minimum Thickness for a Pipe
- ◆ Appropriate Pipe Schedule for new Pipe
- ◆ Minimum Thickness for a Blank (Blind)

3) API 570 – Section 7

- ◆ Inspection Data Evaluation
- ◆ Calculate MAWP of a Piping System

Evening Session: ASME B31.3 & API 570 Homework
Practice all Calculations covered in Class.

- ◆ Question and Answer session

DAY 3

1) ASME B31.3 - Piping Code

Includes understanding:

- ◆ Basic concepts of Piping Flexibility
- ◆ Selection of Piping Materials
- ◆ Fabrication Requirements

2) ASME B31.3 – Calculations & Charts

Learn how to determine:

- ◆ Thermal Pipe Growth
- ◆ Minimum Design Temperatures
- ◆ Welding Preheat Requirements
- ◆ PWHT Requirements

3) API 570 – Section 8-9

- ◆ Repairs, Alterations & Rerating
- ◆ Underground Piping

Evening Session: ASME B31.3 & API 570 Homework
Practice all Calculations covered in Class. Also, complete

- ◆ Question and Answer session

DAY 4

DAY 4

1) ASME B&PV Section IX - Welding Code

Understand the following key concepts.

- ◆ Purpose of the Code
- ◆ Roles of the Welding Inspector
- ◆ Organization of the Code
- ◆ Welding Positions – Test and Field
- ◆ Testing Requirements and Acceptance Criteria
- ◆ Welder Qualification Process and Restrictions
- ◆ Tips on how to find information in the Code

2) ASME B&PV Section IX Review and Evaluate a WPQ (Welder Qualification). Understand

- ◆ Essential Variables for welder qualification
- ◆ Testing required for welder qualification

Evening Session: Section IX Homework. Evaluate two WPQ's

- ◆ Question and Answer session

3) API 570 – Section 8 & 9

- ◆ Repairs, Alterations & Rerating
- ◆ Underground Piping

4) API 577 – Welding Inspection & Metallurgy

Evening Session: Section IX Homework. Evaluate one WPQ. API 570 Homework. Also, complete the API 578 Self-Study Module

- ◆ Question and Answer session

DAY 5

1) ASME B&PV Section IX - Welding Code

Understand the following key concepts

- ◆ Weld Procedure Qualification Process and Restrictions

2) WPS/PQR Review (Weld Procedure)

- ◆ Evaluate a WPS with the associated PQR
- ◆ Question and Answer session



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Tentative training schedule

DAY 6 : Revision previous day

1) ASME B&PV Section V – NDE

Understand the following key concepts.

- ◆ Purpose of the Code
- ◆ Organization of the Code
- ◆ RT Techniques
- ◆ Purpose & Selection of IQI's
- ◆ RT Film Density Requirements
- ◆ Key terms discussed in the Code
- ◆ Tips on how to find information in the Code
- ◆ Question and Answer session

2) API 570 Section 5

- ◆ Inspection & Testing Practices
- ◆ Question and Answer session

3) API 571 - Damage Mechanisms in the Refinery Industry

Evening Session: ASME Section V & API 570 Homework.

Plus the "Mega-Problem". This exercise includes most of the calculations & tables covered in the class. Q&A session

DAY 7

1) Course Review

2) Practice Exam – Exam is similar to the API 570 exam

Required codes for exam

(Participants must bring the appropriate codes required for the API exam)

ASME Codes:

- ◆ B&PV Section V Non-Destructive Examination
- ◆ B&PV Section IX Welding Qualifications
- ◆ B16.5 Flanges & Flanged Fittings
- ◆ B31.3 Process Piping Fabrication

API Codes:

- ◆ API 570 Piping Inspection code
- ◆ API 574 Inspection of Piping Components
- ◆ API 578 Material Verification Program
- ◆ API 571- Damage Mechanisms in the Refinery Industry
- ◆ API 577- Welding Inspection & Metallurgy

Note: See website www.dashinspectorate.com to determine which editions will be used for your exam.

ORIGINAL Codebooks can be obtained from DIPL at 5% Concession cost

Instructor Profile

◆ Professional Qualifications :

- ◆ Bachelor of Engineering: B.E. (Metallurgy),
- ◆ API 510 – Authorized Pressure Vessel Inspector
- ◆ API 570 – Authorized Piping Inspector
- ◆ API 653 – Authorized Above storage Tank Inspector
- ◆ AWS CWI, CWE (Certified welding educator)
- ◆ ASNT NDT Level III (RT, UT, MT, VT, PT)
- ◆ Lead Auditor ISO 9000,14000,18000

Memberships of Professional Organizations:

- ◆ ASNT ;American Society for Non Destructive Testing
- ◆ AWS ;American Welding Society
- ◆ ASME

Experience: EXTENSIVE

Present Job: Director,

M/s DASH INSPECTORATE PVT LTD

.Responsibilities handled include Third Party Inspection. Plant inspection during shut-downs, Inspection during fabrication Welding inspection & NDT consultancy



RBI Experience:

Gone through specialized trainings in RBI and presently doing trainings in RBI and Integrity Assessment. Also member of RBI Study group for well known Oil Refineries in India.