API 570 PIPING INSPECTOR

(Certification Preparation Program)

Course Date:	To Be Determine with Benefeciary
Course Overview:	This is an intensive 10 days training course to provide a comprehensive understanding of the design, inspection and maintenance of process piping based on API 570 standards. It aims to provide the oil, gas and petrochemical industries with the assurance that piping inspectors have been trained under this internationally recognized program to have the required knowledge and experience for inspection of in-service process pressure. Course participants aspiring to be certified by API will get well versed with the various code books and standards to be prepared for the API 570 examination.
Course Objectives:	The course provides participants with the knowledge necessary to: ✓ Successfully pass the API 570 Process Piping Inspector certification exam ✓ Effectively use major codes: ASME B&PV & Sections V, 31.3, 16.5& 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 process piping ✓ Review welding procedures (WPS/PQR) and welder performance qualifications (WPQ)
Who should attend?	The Course is designed for Piping Inspection Engineers, Inspection Personnel, Operating Engineers, Managers, Maintenance Engineers and personnel involved in design, operation, inspection and maintenance of process piping. This course will also be beneficial to those who are preparing themselves for the API 570 certification examination.
Training Outline:	**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 **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 **DAY 3** 1) 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) 2) API 570 – Section 7 □ Inspection Data Evaluation □ Calculate MAWP of a Piping System **DAY 4** 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 **DAY 5** 1) ASME B&PV Section IX - Welding Code: □ 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 WPQUnderstand: □ Essential Variables for welder qualification □ Testing required for welder qualification **DAY 6** 1) ASME B&PV Section IX - Welding Code Understand the concepts: □ Weld Procedure Qualification Process and Restrictions 2) WPS/PQR Review (Weld Procedure) □ Evaluate a WPS with the associated PQR

	DAY 7 1) API 570 – Section 8 & 9 □ Repairs, Alterations & Rerating □ Underground Piping 2) API 577 – Welding Inspection & Metallurgy **DAY 8** 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 **DAY 9** 1) API 570 Section 5 □ Inspection & Testing Practices 2) API 571 - Damage Mechanisms in the Refinery Industry **DAY 10** 1) Course Review 2) Practice Exam – Exam is similar to the API 570 exam
Training Methodology	**Work Shop**

Duration:10Days**Venue:**Jubail

Time:08:30 AM -05:30 PM **Numbers of hours: 80** Hours