



INDUSTRY-LEADING TRAINING COURSES

FUEL YOUR CURIOSITY: TRAINING TO GROW YOUR INDUSTRY KNOWLEDGE

Wherever you are in your career, new hire, mid-career, or expert, we have a training course to support your professional growth.

You will learn from a team of highly skilled and knowledgeable engineers who have 20+ years of industry experience. Our instructors combine this expertise with the latest API and ASME codes and standards to develop industry relevant and applicable training courses. All training courses offered by E²G qualify as activities for API's new professional development hours (PDH).



The API-U training courses are part of the API curriculum and designed to provide excellence in petroleum industry training. E²G is API-approved to deliver these industry standard courses.

DAMAGE MECHANISMS API RP 571

This course covers an overview of basic metallurgy and a description of the most common refining processes. Its major focus includes detailed discussions of the key refining damage mechanisms addressed in API RP 571 and examples of equipment damage and failures.

FITNESS-FOR-SERVICE API 579-ASME FFS-1

This course covers API 579-1/ASME FFS-1 with a focus on select assessment procedures. You'll gain a foundation in FFS assessments along with an in-depth study of volumetric metal loss (Parts 4, 5 and 6) which emphasize the importance of identification, inspection techniques for flaw characterization, and an overview of remaining life, remediation, and methods to extend the life of damaged equipment.

PRESSURE RELIEVING SYSTEMS API 520/521

This course covers proper sizing, selection, and installation of pressure relieving devices (PRDs) to ensure adequate overpressure protection is provided and reduce hazards. You'll learn about API 520/521 Standards and protection of atmospheric storage tanks per API 2000 Standard, and boilers per ASME Boiler & Pressure Vessel Code, Section I.

RISK-BASED INSPECTION API 580/581

This API-approved, Risk-Based Inspection (RBI) training course provides a basic understanding of RBI principles, recommendations, requirements, and the methodologies of API RP 580 and 581. You'll learn how to apply RBI technology to processing equipment by determining the probability of failure, the consequence of failure, risk, and how to plan for the equipment's next inspection.



API RBI SOFTWARE

You will learn how to use API RBI software and helps you understand API RP 581 technology, interpret its calculated results to help develop an effective RBI program.

DAMAGE MECHANISMS FOR CHEMICAL & PETROCHEMICAL INDUSTRIES

This course provides an overview of the primary damage mechanisms (DMs) applicable to fixed equipment in the chemical and petrochemical industry and included in API RP 571. You will also learn details of typical NDE methods applicable for the detection and characterization of damage related to the specific DMs.

FUNDAMENTALS OF ASSET LIFECYCLE MANAGEMENT (FALCM)

The new FALCM course is designed for new engineers. This course teaches process safety management (PSM); the fundamentals of plant equipment design, inspection and reliability; and lifecycle management of fixed equipment.

INTRO TO INSTRUMENTATION AND PROCESS CONTROL

You will learn about the application, hardware, installation, and performance of process measurement instrumentation and control valves. The course covers the advantages and disadvantages of various flow, level, pressure, and temperature measurement techniques.

INTRO TO MATERIALS ENGINEERING

This course delivers a practical understanding of the plant materials used in the fabrication of process plant pressure vessels and piping systems, which are key to equipment reliability.

INTRO TO WELDING ENGINEERING

The course will introduce several common welding processes, discuss filler metal identification and selection, review key elements of welding procedures and qualifications, and provide guidance for field-applied heat treatments.

INTRO TO eec WEBTOOLS

The eec WebTools course is an introduction to the eec WebTools environment, and has options for advanced training for eecPlantEngineer, and IntelliJoint.

MECHANICAL INTEGRITY (MI) PROGRAMS

Learn how the MI program fits within an overall asset management program, compliments reliability efforts, and applies across the life cycle of assets – from the design, fabrication, and construction, through the installation, operation, and decommissioning phases.

PIPING VIBRATION

This course provides an overview of piping vibration measurement and severity analysis, guidance on identification, evaluation, and mitigation of piping vibration problems.

PRESSURE VESSELS: DESIGN BY ANALYSIS I & II

DBA I provides background information related to the original development and evolution of DBA technology in ASME Section VIII Division 2 (VIII-2). DBA II builds upon the principles established in DBA I and offers an in-depth overview of the material properties needed to perform DBA.

PRESSURE VESSELS: FATIGUE I & II

This course uses practical examples to cover the technical basis for VIII-2 fatigue evaluation methods, an overview of fatigue screening, and perspective on the legacy ASME smooth bar fatigue method. Fatigue II builds upon the principles established in Fatigue I and includes the Battelle Structural stress method for welded fatigue applications, and the strain-life equation to predict remaining life. *Recommended prerequisite: DBA I & II.*

PRESSURE VESSELS: ASME VIII-1

This course covers the basics of pressure vessel design rules of the ASME Boiler & Pressure Vessel Code, Section VIII, Division 1 (ASME VIII-1), including a review of the general requirements, component design, material consideration, fabrication, and examination and testing.

PRESSURE VESSELS: ASME VIII-2

The course covers the nine parts of ASME Boiler & Pressure Vessel Code VIII-2, including general requirements responsibilities and duties, design by rule (DBR), design by analysis (DBA), and pressure vessel overpressure protection.

PROCESS PIPING

The course provides a practical understanding of the basics of piping design and analysis rules of the ASME Process Piping Code, B31.3 (ASME B31.3). You'll gain an understanding of ASME B31.3, including piping component and system design, material considerations, fabrication, and examination and testing.

SagePlus™ SOFTWARE

You will learn how to use the SagePlus™ suite of analytical tools for evaluating equipment, such as process vessels, piping, and storage tanks.

SIMFLEX-III SOFTWARE

The course covers an overview of the SIMFLEX-III program features, input structure, analysis procedures, input keywords, output description, and other special topics. Recommended prerequisite: basic understanding of ASME B31.3 Process Piping Code.

STORAGE TANKS

During this course, storage tank engineers will gain a practical understanding of the basics of tank design and analysis, including material considerations, fabrication, and examination.



Both instructors were extremely informative and articulated their individual presentations perfectly. The course content covered was relevant to my daily work and very useful. The examples they used were helpful and I have already implemented some of the knowledge I have taken away from the course.

– Damage Mechanisms API RP 571 course attendee, December 2021

2022 SCHEDULE IS
NOW AVAILABLE

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