



Hydrogen Master Class

Engineering Assessments for Hydrogen and Hydrogen Blend Pipelines

Master Class Training for Energy Transportation Sector Personnel –
10 hours Instruction with Qualification Examination \$895

Course Overview

As the global energy sector moves toward cleaner fuels, hydrogen is becoming a key component in reliable low carbon energy transition.

This master class is a part of our Core Skill and Code Enhancement series. It is specifically designed to provide engineers responsible for the repurposing or design of hydrogen and hydrogen blend pipelines with the skills necessary to conduct the necessary engineering assessment and oversight.

The course offers comprehensive guidance on the proper execution of Engineering Assessments, focusing on the new hydrogen and hydrogen blend requirements in regulations codes and standards.

Participants will gain practical knowledge and skills for application of engineering assessments to the unique challenges of hydrogen, such as material compatibility, pressure testing, integrity management, and regulatory compliance.

Pre-course video materials will provide foundational knowledge, while the live session will dive deeper into real-world case studies and advanced assessment considerations.

On-Demand & Remote Access Training

This course is presented with a combination of video modules and instructor led sessions. Instructor led sessions are presented on the Zoom platform allowing active remote participation.

Students are encouraged to ask questions during the instructor led sessions. Students unable to attend the instructor led sessions will be provided a recording of the session to ensure no instruction content is missed.

All courses require access to a suitable electronic device (computer/laptop/tablet) with an internet connection for access to the training dashboard and videos.

Students will establish a unique login credential for accessing the Training Dashboard during the registrations process. Once registered, students will be advised of the date and time of instructor led sessions.

Who Should Attend

This master class is ideal for pipeline engineers, project managers, and technical specialists involved in the planning and execution of hydrogen or hydrogen blend projects.

Prerequisites

Students should have previously completed foundational training on ASME B31 piping series and be familiar with the structure and scope of parts 3, 8, and 12.

Course Materials Included

- Course checklist and reference guide
- Inspection guidelines

Learning Objectives

- Understand the role of hydrogen in energy transition and its impacts on pipeline design and operation.
- Learn the key technical considerations for repurposing existing pipelines for hydrogen or hydrogen blends.
- Master the steps involved in performing a detailed Engineering Assessment as required by regulation and in accordance with the ASME requirements and API recommended practices.
- Explore best practices for managing integrity risks associated with hydrogen service, including fracture control and material selection.
- Apply theoretical knowledge through practical examples and a repurposing case study, ensuring participants can confidently approach real world projects

Course Videos

Course Video Modules introduce hydrogen as an energy carrier, its properties, and an overview of pipeline design requirements for hydrogen and hydrogen blends.

Topics include:

- Regulatory and standards application review
- Hydrogen fundamentals and energy potential
- ASME B31 series – Hydrogen and Hydrogen Blend Pipelines
- Review of PSMS recommendations applicable to Hydrogen

Instructor Led Sessions

Instructor led sessions provide in-depth training on performing Engineering Assessments for hydrogen and hydrogen blend pipelines, covering:

- Risk-based methodologies for pipeline repurposing and new designs
- Assessment compliance with codes, standards and regulations
- Case study on repurposing pipelines for hydrogen service
- Workshop-style problem-solving sessions to apply concepts

In order to execute compliant pipeline projects in the American energy transportation sector, the 49 CFR 195.510 requires personnel to have regular update training to maintain their established competencies.

This course content is designed to provide a detailed understanding and updates of the requirements for those involved in conducting engineering assessments.

Assessment Method

This course of study is a suitable contributing element for an IETCC Certificate of Personnel Competence in Pipeline design level 3. The fee for this course includes all program requirements including a comprehension verification exam.

Qualification Exam

After each video and instructor led session, students will be provided with examination questions to demonstrate their comprehension of the material. Successful completion requires an average score of 80%.