

API and ASME Course Per Task Library

Course Descriptions



These courses are designed to assist pipeline operators in meeting the requirements of the DOT Operator Qualification Rule. The DOT Operator Qualification Rule requires pipeline operators to develop and maintain a written qualification program for individuals performing covered tasks on pipeline facilities. The DOT also requires that pipeline operators qualify their workforce on covered tasks. The Operator Qualification Rule includes Subpart N 49 CFR Part 192 and Subpart G 49 CFR Part 195.

AVAILABLE COURSES

■ **API-1.1 Measure Structure-to-Soil Potentials**

Measurement of Structure-to-Soil Potentials explains the knowledge required to perform cathodic protection tests, including cathodic protection systems, test equipment, and the procedure for measuring structure-to-soil potentials. Abnormal operating conditions (AOCs) are also discussed. (15 min)

■ **API-1.2 Conduct Close Interval Survey**

Conduct Close Interval Survey explains the required knowledge prior to conducting a close interval survey, the preparation required before the survey, and the steps to perform the close interval survey. Abnormal operating conditions (AOCs) are also discussed. (20 min)

■ **API-1.3 Test to Detect Interference**

Test to Detect Interference explains tests conducted to detect interference, analyzing abnormal readings, communicating with foreign pipeline operators, documentation, and abnormal operating conditions (AOCs) that may be encountered during the test. (15 min)

■ **API-1.4 Inspect and Perform Electrical Test of Bonds**

Inspect and Perform Electrical Test of Bonds explains the purpose and types of electrical bonds, required knowledge prior to inspecting and testing bonds, visual inspections, and electrical testing bonds. Abnormal operating conditions (AOCs) are also discussed. (15 min)

■ **API-1.5 Inspect and Test Electrical Isolation**

Inspect and Test Electrical Isolation explains insulating devices to electrically isolate two metal structures, equipment needed for inspecting electrical isolation, steps for inspecting and testing isolation, and any possible AOCs that may be encountered. (15 min)

■ **API-2.1 Verify Test Lead Continuity**

Verify Test Lead Continuity explains the purpose of test leads, indications of a damaged test lead, the steps for verifying test lead continuity, and abnormal operating conditions (AOCs) that may be encountered. (15 min)

■ **API-2.2 Repair Damaged Test Lead**

Repair Damaged Test Leads explains how to identify damaged test leads, determine if the test lead can be repaired or must be replaced, and how to repair or replace damaged test leads. (10 min)

■ **API-2.3 Install Test Leads by Non-Exothermic Welding Methods**

Install Test Leads by Non-Exothermic Welding Methods explains four non-exothermic weld methods of attaching test leads, required knowledge, and the steps for installing test leads by non-exothermic welding methods. (10 min)

■ **API-2.4 Install Test Leads by Exothermic Welding Methods**

Install Test Leads by Exothermic Welding Methods explains the purpose of installing test leads, the knowledge required to perform exothermic welds, the steps for performing exothermic welds, and abnormal operating conditions (AOCs) that may be encountered while installing test leads. (20 min)

- **API-3.0 Obtain a Voltage and Current Output Reading From a Rectifier to Verify Proper Performance**

Obtain a Voltage and Current Output Reading From a Rectifier to Verify Proper Performance reviews the role of a rectifier in cathodic protection, explains the procedure for verifying the proper performance of the rectifier, and describes possible abnormal operating conditions (AOCs). (15 min)

- **API-4.1 Troubleshoot Rectifier**

Troubleshoot Rectifier explains the purpose of a rectifier and its components in a cathodic protection system, the required knowledge prior to troubleshooting a rectifier, the steps of troubleshooting, and possible abnormal operating conditions (AOCs). (15 min)

- **API-4.2 Repair or Replace Defective Rectifier Components**

Repair or Replace Defective Rectifier Components reviews the role of a rectifier in cathodic protection, identifies the knowledge and skills required for repairing a rectifier, explains the procedure for repairing a rectifier by replacing defective components, and describes possible abnormal operating conditions (AOCs). (20 min)

- **API-4.3 Adjust Rectifier**

Adjust Rectifier reviews the role of a rectifier in cathodic protection, identifies the knowledge and skills required for making adjustments to a rectifier, explains the procedure for making adjustments to a rectifier based on cathodic protection system requirements, and describes possible abnormal operating conditions (AOCs). (20 min)

- **API-5.1 Examine for Mechanical Damage on Buried or Submerged Pipe**

Examine for Mechanical Damage on Buried or Submerged Pipe explains the purpose for damage inspection, skills and knowledge required, the procedure for examining the pipe for mechanical damage on buried or submerged pipelines, and abnormal operating conditions (AOCs) that may be encountered while performing the task. (15 min)

- **API-5.2 Examine for External Corrosion on Buried or Submerged Pipe**

Examine for External Corrosion on Buried or Submerged Pipe explains the purpose for inspection, required knowledge, the procedure for examining the pipe for external corrosion on buried or submerged pipelines, and abnormal operating conditions (AOCs) that may occur while performing the task. (15 min)

- **API-5.3 Inspect the Condition of External Coating on Buried or Submerged Pipe**

Inspect the Condition of External Coating on Buried or Submerged Pipe explains the purpose and the procedure for inspecting external coatings. Abnormal operating conditions (AOCs) are also discussed. (15 min)

- **API-7.1 Perform Visual Inspection of Atmospheric Coatings**

Visual Inspection of Atmospheric Coatings explains the purpose of the atmospheric coatings inspections, knowledge and skills required, the procedure for the inspection, and any abnormal operating conditions (AOCs) that may be encountered during the process. (15 min)

- **API-7.2 Prepare Surface for Coating Using Hand and Power Tools**

Prepare Surface for Coating Using Hand and Power Tools explains how to prepare a pipe surface using hand washing, hand tools, and hand power tools. Abnormal operating conditions (AOCs) that may be encountered while performing this task are also discussed. (15 min)

- **API-7.3 Prepare Surface for Coating by Abrasive Water Blasting**

Prepare Surface for Coating by Abrasive Water Blasting discusses different pipe surface preparation and abrasive water blasting methods. Abnormal operating conditions (AOCs) that may be encountered while performing these tasks are also discussed. (25 min)

- **API-7.4 Prepare Surface for Coating by Abrasive Blasting Methods Other than Water**

Prepare Surface for Coating by Abrasive Blasting Other than Water explains how to prepare a pipe surface by abrasive blasting with various media. The course also addresses equipment setup, environmental concerns, high-pressure discharge hazards, removal of old coating, transition for new coating, and potential abnormal operating conditions (AOCs). (25 min)

- **API-7.5 Apply Coating Using Hand Application Methods**

Apply Coating Using Hand Application Method discusses the hand application of protective coating to pipeline facilities by rolling, brushing, wrapping, and melting hot sticks. Required tools and equipment, types of coatings, coating transitions, application techniques, and abnormal operating conditions (AOCs) are also addressed. (25min)

- **API-7.6 Apply Coating Using Spray Applications**

Apply Coating Using Spray Applications explains how to apply a coating to a pipeline facility by spray application. The course addresses coating types and spray methods, tools and equipment, coating specifications and preparation, atmospheric influences on coating operations, coating application operations, job documentation, and abnormal operating conditions (AOCs). (20 min)

- **API-7.7 Perform Coating Inspection**

Perform Coating Inspection discusses inspection of a pipeline facility coating after the facility has been prepared for coating as well as after the coating has been applied. Testing discussed in this course includes that for dry and wet film thickness, pinholes/holidays, coating adhesion, Barcol hardness, and the Tooke test. Abnormal operating conditions (AOCs) are also discussed. (35 min)

- **API-8.1 Measure Pit Depth with Pit Gauge**

Measure Pit Depth with Pit Gauge addresses visual examination of pipe, preparation of measurement area, calibration and verification of a pit gauge, how to use a pit gauge to measure deepest wall loss, documentation of findings, and abnormal operating conditions (AOCs). (15 min)

- **API-8.2 Measure Wall Thickness with Ultrasonic Meter**
Examine the assembly, calibration, and use of an ultrasonic meter to confirm nominal wall thickness of pipe or appurtenances. Documentation, notifications, and potential abnormal operating conditions (AOCs) are also discussed. (20 min)
- **API-8.3 Measure Corroded Area**
Measure Corroded Area identifies the knowledge and skills required for measuring a corroded area on steel pipe, explains the measuring procedure, and describes possible abnormal operating conditions (AOCs). (20 min)
- **API-9.1 Install Bonds**
Install Bonds explains how to install bonds, the use of shunts, the use of blocking diodes, and AOCs that may occur while installing bonds. (15 min)
- **API-9.2 Install Galvanic Anodes**
Install Galvanic Anodes explains how to determine where to locate galvanic anodes, required excavation, placement and connection of the anodes, testing and documentation, and any abnormal operating conditions, (AOCs) that may be encountered while performing this task. (15 min)
- **API-9.3 Install Rectifiers**
Install Rectifiers explains how a rectifier functions, the knowledge needed to install rectifiers, steps for installing a rectifier, and the required documentation when installing rectifiers. (15 min)
- **API-9.4 Install Impressed Current Groundbeds**
Install Impressed Current Groundbeds explains what an impressed current groundbed is, types of groundbeds and installation requirements, and steps needed to install impressed current groundbeds. (15 min)
- **API-9.5 Repair Shorted Casings**
Repair Shorted Casings describes the basic components of casing systems and the types of shorts that may be encountered, explains the repair procedure, and describes possible abnormal operating conditions (AOCs) that may be encountered. (20 min)
- **API-9.6 Install Electrical Insulating Device**
Install Electrical Insulating Device explains the purpose of installing insulating devices, the knowledge and skills required, the procedures for installing various insulating devices, and any abnormal operating conditions (AOCs) that may be encountered during the process. (40 min)
- **API-10.1 Insert and Remove Coupons**
Insert and Remove Coupons examines the purpose of corrosion coupons, including their removal and insertion. Required documentation and post-removal follow-up actions such as leakage checks and coupon submittal are also discussed, as are abnormal operating conditions (AOCs). (15 min)
- **API-10.2 Monitor Probes (Online)**
Monitor Probes (Online) discusses the use of a data logger to monitor pipeline probes, including data logger operation, verification and documentation of data logger readings, task documentation, and abnormal operating conditions (AOCs) that could be encountered during the task. (15 min)
- **API-12.0 Perform Visual Inspection of Internal Pipe Surface**
Visually Inspect Internal Pipe Surface describes the types of corrosion and/or damage that may be discovered while visually inspecting an internal pipe surface, explains the inspection procedure, and describes possible abnormal operating conditions (AOCs). (20 min)
- **API-14.1 Locate Line**
Locate Line examines the procedure for locating pipelines, including the use of the One-Call Notification System, maps and drawings, visual assessments, location methods, equipment, and verification techniques. Abnormal operating conditions (AOCs) are also discussed. (35 min)
- **API-14.2 Install, Inspect, and Maintain Permanent Marker**
Install, Inspect, and Maintain Permanent Marker discusses the knowledge and skills necessary to install, inspect, and maintain permanent markers for underground pipelines. Abnormal operating conditions (AOCs) are also discussed. (25 min)
- **API-14.5 Install, Inspect, and Maintain Temporary Marker**
Install, Inspect, and Maintain Temporary Marker discusses the knowledge and skills necessary to install, inspect, and maintain temporary markers for underground pipelines. Abnormal operating conditions (AOCs) are also discussed. (25 min)
- **API-15.1 Perform Visual inspection of Surface Conditions of Right-of-Way**
Perform Visual inspection of Surface Conditions of Right-of-Way discusses the steps necessary to visually inspect surface conditions of pipeline rights-of-way. Abnormal operating conditions (AOCs) are also discussed. (25 min)
- **API-16.1 Inspect Navigable Waterway Crossing**
Examine location and inspection of submerged pipelines in navigable waterways, including determination of pipeline depth of cover and conditions that could potentially damage the pipeline. Potential abnormal operating conditions (AOCs) are also noted. (25 min)
- **API-19.1 Perform Valve Body Winterization or Corrosion Inhibition**
Perform Valve Body Winterization or Corrosion Inhibition discusses the purposes of valve body winterization and corrosion inhibition as well as identifying, isolating, depressurizing, and draining valves. Connection and operation of injection equipment are also discussed as are potential abnormal operating conditions (AOCs). (25 min)
- **API-19.2 Perform Valve Lubrication**
Perform Valve Lubrication addresses verification of valve identifiers, pre- and post-task notifications, lubrication of the valve stem, bearings, and associated components, task documentation, and potential abnormal operating conditions (AOCs). (35 min)

- **API-19.3 Perform Valve Seat Sealing**

Perform Valve Seat Sealing discusses verification and proper closure of valves, isolation and depressurization of the valve body, identification and injection of proper sealants, checking for leaks, sealant flushing, notification, documentation, and abnormal operating conditions (AOCs). (30 min)

- **API-19.4 Perform Valve Stem Packing Maintenance**

Discuss valve identifiers, types of injectable packing, proper notifications and documentation, insertion of injectable packing, and potential abnormal operating conditions (AOCs). (30 min)

- **API-19.5 Adjust Actuator/Operator, Electric**

Adjust Actuator/Operator, Electric explains why we need to adjust the actuators/operators; describes the type of adjustments needed such as limit switches, torque switches, and function tests, discusses the procedure for making the adjustments, and lists any abnormal operating conditions (AOCs) that may be encountered while performing the task. (15 min)

- **API-19.6 Adjust Actuator/Operator, Pneumatic**

Adjust Actuator/Operator, Pneumatic explains why we need to adjust the actuators/operators; discusses the type of adjustments needed such as limit switches, torque switches, mechanical stops, and function tests, describes the procedure for making the adjustments, and lists abnormal operating conditions (AOCs) that may be encountered while performing the task. (15 min)

- **API-19.7 Adjust Actuator/Operator, Hydraulic**

Adjust Actuator/Operator, Hydraulic explains why we need to adjust actuators or operators, the type of adjustments that are needed, the procedure for the adjustments, and any abnormal operating conditions (AOCs) that may be encountered. (15 min)

- **API-20 Inspect Mainline Valves**

Inspect Mainline Valves examines inspection of mainline valves to confirm that they are in good working order and performing as expected. In addition to valve condition, the course addresses valve identification, security, access control, and position. Other topics include functionality testing, notifications, documentation, and potential abnormal operating conditions (AOCs). (25 min)

- **API-21.1 Repair Valve Actuator/Operator, Pneumatic**

Repair Valve Actuator/Operator, Pneumatic explains the general steps for repairing a pneumatic actuator/operator including disassembly, including the inspection of parts, replacement of parts, and reassembly. Abnormal operating conditions (AOCs) that may be encountered while performing the task are also discussed. (15 min)

- **API-21.2 Disassemble/Reassemble Valves**

Disassemble/Reassemble Valves discusses the disassembly and reassembly of valves, including valve identification and isolation, valve integrity testing, proper notification and documentation, and recognizing and reacting to abnormal operating conditions (AOCs). (25 min)

- **API-21.3 Perform Internal Inspection of Valves**

Perform Internal Inspection of Valves discusses the purpose of internal inspection of valves, key valve parts to be inspected, inspection terms, notification and documentation of inspection results, and potential abnormal operating conditions (AOCs). (20 min)

- **API-21.4 Repair Valve Actuator/Operator, Hydraulic**

Repair Valve Actuator/Operator, Hydraulic explains the general steps for repairing a hydraulic actuator/operator including disassembly, including the inspection of parts, replacement of parts, and reassembly. Abnormal operating conditions (AOCs) that may be encountered while performing the task are also discussed. (15 min)

- **API-21.5 Repair Valve Actuator/Operator, Electric**

Repair Valve Actuator/Operator, Electric (2x) explains the general steps for repairing a electric actuator or operator including disassembly, including the inspection of parts, replacement of parts, and reassembly. Abnormal operating conditions (AOCs) that may be encountered while performing the task are also discussed. (15 min)

- **API-22.1 Inspect Tank Pressure/Vacuum Breakers**

Explain the purpose of a tank pressure/vacuum breaker, required knowledge for the inspection, the steps for inspecting a tank pressure/vacuum breaker, and any abnormal operating conditions that may occur while performing the task. (15 min)

- **API-22.2 Inspect, Test, and Calibrate HVL Tank Pressure-relief Valves**

Inspect, Test, and Calibrate HVL Tank Pressure-relief Valves explains why relief valve inspection, testing, and calibration is needed, how to perform a visual inspection, and how to test and calibrate a relief valve. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (15 min)

- **API-23.1 Maintain/Repair Relief Valves**

Maintain/Repair Relief Valves explains why relief valve maintenance is needed, how to maintain/repair relief valves, and how to make adjustments. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (15 min)

- **API-23.2 Inspect, Test, and Calibrate Relief Valves**

Inspect, Test, and Calibrate Relief Valves explains why relief valve inspection, testing, and calibration is needed, how to perform a visual inspection, testing a relief valve for functionality and repeatability, and calibration of a relief valve before returning it to service. Abnormal operating conditions (AOCs) that may be encountered during the task are also discussed. (15 min)

- **API-24.1 Maintain/Repair Pressure-limiting Devices**

Maintain/Repair Pressure-Limiting Devices explains the purpose of maintaining and repairing pressure-limiting devices, describes the types of pressure-limiting devices, explains the procedure for maintenance/repair, and discusses any abnormal operating conditions (AOCs) that may be encountered during the task. (15 min)

- **API-24.2 Inspect, Test, and Calibrate Pressure-Limiting Devices**

Inspect, Test, and Calibrate Pressure-Limiting Devices explains the purpose of inspecting, testing, and calibrating pressure limiting devices; describes the types of pressure limiting devices; explains the procedures for inspecting, testing, and calibrating; and discusses abnormal operating conditions (AOCs) that may be encountered during the task. (20 min)

- **API-25.1 Inspect, Test, and Calibrate Pressure Switches**
Inspect, Test, and Calibrate Pressure Switches explains the purpose and different functions of pressure switches; the procedure for inspecting, testing, and calibrating a pressure switch; and any abnormal operating conditions (AOCs) that may be encountered. (15 min)
- **API-25.2 Inspect, Test, and Calibrate Pressure Transmitters**
Inspect, Test, and Calibrate Pressure Transmitters explains the purpose and different types of pressure transmitters, the procedure for inspecting, testing, and calibrating a pressure transmitter, and any abnormal operating conditions (AOCs) that may be encountered. (20 min)
- **API-27.1 Perform Routine Inspection of Breakout Tanks**
Explain the purpose of a breakout tank, the knowledge required to perform a visual inspection, the steps for performing a routine inspection, and abnormal operating conditions (AOCs) that may occur when doing an inspection. (15 min)
- **API-30.0 Test Overfill Protective Devices**
Explain the purpose of an overfill protective device, the knowledge required before OPD testing, the steps of performing an OPD test, and how to react to abnormal operating conditions that may occur while performing the test. (15min)
- **API-31.0 Inspect and Calibrate Overfill Protective Devices**
Explains the purpose of an overfill protective device, knowledge required to inspect and calibrate OPDs, steps to inspect and calibrate an OPD, and abnormal operating conditions (AOCs) that can occur when inspecting and calibrating OPDs. (20 min)
- **API-32.0 Observe Excavation Activities**
Observation of Excavation Activities examines the responsibilities of a qualified observer, excavation complexity, observation procedure, potential hazards, and abnormal operating conditions (AOCs). (30 min)
- **API-38.1 Perform Visual Inspection of Pipe and Pipe Components Prior to Installation**
Perform Visual Inspection of Pipe and Pipe Components Prior to Installation explains the importance of the inspection, possible defects on pipe and components, the procedure for the inspection, and abnormal operating conditions (AOCs) that may be encountered. (15 min)
- **API-38.3 Perform Visual Inspection of Welds**
Perform Visual Inspection of Welds explains why welds should receive a visual inspection, the defects that may be found during a visual inspection, and any abnormal operating conditions (AOCs) that may be encountered. (10 min)
- **API-39.0 Perform Backfilling**
Perform Backfilling describes how to prevent damage to a pipeline while backfilling a trench, explains the procedure for backfilling a trench, and describes abnormal operating conditions (AOCs) that may be encountered. (20 min)
- **API-40.6 Install and Remove Plugging Machine**
Install and Remove Plugging Machine explains the purpose of plugging machines, describes how to install and remove a plugging machine, and lists abnormal operating conditions (AOCs) that may be encountered during the task. (15 min)
- **API-40.9 Install and Remove Completion Plug on Pipelines Larger than 2 Inches**
Install and Remove Completion Plug on Pipelines Larger than 2 Inches explains the preparation, steps for installing a completion plug, steps for removing a completion plug, and abnormal operating conditions (AOCs) that may be encountered during the task. (20 min)
- **API-41.0 Conduct Pressure Test**
Conduct Pressure Test explains test media, required pressure, test duration, developing a pressure test plan, conducting a pressure test, and abnormal operating conditions (AOCs) that may be encountered during the pressure test. (15 minutes)
- **API-43.4 Operate Valves Remotely on a Liquid Pipeline System**
Operate Valves Remotely on a Liquid Pipeline System discusses the purpose of operating valves remotely, explains how to operate valves remotely, and lists possible abnormal operating conditions (AOCs) that may be encountered. (15 min)
- **API-44.3 Inspect, Test, and Maintain Flow Computer for Hazardous Liquid Leak**
Inspect, Test, and Maintain Flow Computer for Hazardous Liquid Leak explores how to inspect, test, and calibrate CPM systems to detect leaks and prevent potential damage to pipelines. Abnormal operating conditions (AOCs) are also discussed. (20 min)
- **API-44.4 Inspect, Test, and Perform Corrective and Preventative Maintenance of Tank Gauging for Hazardous Liquid Leak Detection**
Explain the purpose of inspecting, testing, and maintaining tank gauging for hazardous liquid leak detection, the knowledge needed to accomplish the task, the steps for performing the task, and abnormal operating conditions (AOCs) that may occur while performing the task. (20 min)
- **API-44.5 Prove Flow Meters for Hazardous Liquid Leak Detection**
Prove Flow Meters for Hazardous Liquid Leak Detection examines the use of master meters and conventional displacement provers for proving flow meters for hazardous liquid leak detection. Abnormal operating conditions (AOCs) that may be encountered when proving flow meters for hazardous liquid leak detection are also discussed. (20 min)
- **API-44.6 Maintain Flow Meters for Hazardous Liquid Leak Detection**
Maintain Flow Meters for Hazardous Liquid Leak Detection lists types of flow meters and how they work. The course also examines the procedure for removal and repair of flow meters. Abnormal operating conditions (AOCs) are also discussed. (20 min)

- **API-44.7 Inspect, Test, and Maintain Gravimeters/Densitometers for Hazardous Liquid Leak Detection**
Inspect, Test, and Maintain Gravimeters/Densitometers for Hazardous Liquid leak Detection explains qualifications and knowledge required, initial inspection, maintenance, and returning the instruments to service. Abnormal operating conditions (AOCs) are also discussed. (20 min)
- **API-44.8 Inspect, Test, and Maintain Temperature Transmitters for Hazardous Liquid Leak Detection**
Inspecting, Testing, and Maintaining Temperature Transmitters examines what is involved with inspection, testing, and maintenance of temperature transmitters, and lists abnormal operating conditions (AOCs) that may be encountered. (25 min)
- **API-63.1 Perform Start-up of a Liquid Pipeline (Field)**
Discuss the actions necessary to start up a liquid pipeline, including flow path configuration, pumping unit start-up, monitoring of operational data, and steady state operation. Potential abnormal operating conditions (AOCs) are also examined. (20 min)
- **API-63.2 Perform Shutdown of a Liquid Pipeline (Field) Locally Operate Valves on a Liquid Pipeline System explores the local operation of valves by using tools and also by locally operating actuators.** The course includes preparations for the task, impact of pressure changes as a result of local operation, steps for operation, and abnormal operating conditions (AOCs) that may be encountered during the task. (20 min)
- **API-63.3 Monitor Pressures, Flows, Communications, and Line Integrity and Maintain Them Within Allowable Limits on a Liquid Pipeline System (Field) Examine common requirements for monitoring and maintaining a liquid pipeline in the field.** Potential abnormal operating conditions (AOCs) are also discussed. (20 min)
- **API-63.4 Locally Operate Valves on a Liquid Pipeline System Locally Operate Valves on a Liquid Pipeline System explores the local operation of valves by using tools and also by locally operating actuators.** The course includes preparations for the task, impact of pressure changes as a result of local operation, steps for operation, and abnormal operating conditions (AOCs) that may be encountered during the task. (20 min)
- **ASME-0001 Measure Structure-to-Electrolyte Potential**
Measure Structure-to-Electrolyte Potential explains the knowledge required to perform cathodic protection tests, including an overview of cathodic protection systems and test equipment, and the procedure for measuring structure-to-electrolyte potential. Abnormal operating conditions (AOCs) are also discussed. (15 min)
- **ASME-0011 Conduct Close Interval Survey**
Conduct Close Interval Survey explains the purpose of a close interval survey, the preparation work for the survey, the steps to perform the close interval survey, including how to take structure-to-soil potentials and log data. Abnormal operating conditions (AOCs) are also discussed. (20 min)
- **ASME-0021 Measure Soil Resistivity**
Measure Soil Resistivity covers soil resistivity measurement methods, the appropriate measuring equipment and tools, proper testing locations, how to measure soil resistivity and record data, and abnormal operating conditions (AOCs) that may be encountered during this task. (25 min)
- **ASME-0031 Inspect and Monitor Galvanic Ground Beds/Anodes**
Inspect and Monitor Galvanic Ground Beds/Anodes explains how to inspect and monitor galvanic ground beds and anodes by verifying their test location, taking structure-to-electrolyte potentials, analyzing the remaining life of the anodes, and documenting the results. Possible abnormal operating conditions (AOCs) are also discussed. (20 min)
- **ASME-0041 Install and Maintain Mechanical Electrical Connections**
Install and Maintain Mechanical Electrical Connections explains how to install mechanical electrical connections, verify the test equipment, perform maintenance on damaged test leads, and verify mechanical integrity and electrical continuity. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (10 min)
- **ASME-0051 Install Exothermic Electrical Connections**
Install Exothermic Electrical Connections explains the purpose of installing electrical connections, discusses the knowledge required prior to performing the exothermic welds, describes the steps and equipment for performing exothermic welds, and lists possible abnormal operating conditions (AOCs) that may be encountered during the installation. (20 min)
- **ASME-0061 Inspect or Test Cathodic Protection Bonds**
Inspect or Test Cathodic Protection Bonds explains the purpose of cathodic protection bonds, types of bonds, the use of shunts, the procedure for inspecting and testing, and how to recognize and react to any abnormal operating conditions (AOCs) that may occur during the inspection or testing. (15 min)
- **ASME-0071 Inspect or Test Cathodic Protection Electrical Isolation Devices**
Inspect or Test Cathodic Protection Electrical Isolation Devices explains the purpose of electrical isolation devices, the locations and types of isolating devices, the procedures for inspecting and testing isolation devices, and discusses abnormal operating conditions (AOCs) that may be encountered while inspecting or testing cathodic protection electrical isolation devices. (20 min)

- **ASME-0081 Install Cathodic Protection Electrical Isolation Devices**

Install Cathodic Protection Electrical Isolation Devices explains the purpose of installing electrical isolating devices, the knowledge and skills required, the procedures for installing various electrical isolating devices, and potential abnormal operating conditions (AOCs) that may be encountered during the process. (25 min)

- **ASME-0091 Troubleshoot Active Cathodic Protection System**

Troubleshoot Active Cathodic Protection System explains the purpose of troubleshooting cathodic protection systems. It also describes safety precautions for the task, lists equipment needed for troubleshooting, and explains the troubleshooting procedures for rectifiers, ground beds, cable, interference, and metallic contacts. Abnormal operating conditions (AOCs) that may be encountered while troubleshooting the system are also discussed. (20 min)

- **ASME-0101 Inspect Rectifier and Obtain Readings**

Inspect Rectifier and Obtain Readings reviews the role of a rectifier in cathodic protection and describes the procedure for inspecting a rectifier. It explains how to obtain voltage and current output readings from a rectifier and how to use these readings to verify the proper performance of the rectifier. The procedure includes information about measuring voltage, calculating current, validating readings to confirm that the rectifier is operating as expected, and documenting the data. The course also describes how to recognize and react to abnormal operating conditions (AOCs). (15 min)

- **ASME-0111 Maintain Rectifier**

Maintain Rectifier reviews the role of a rectifier in cathodic protection and describes the procedure for performing rectifier maintenance. The procedure includes troubleshooting the rectifier, repairing the rectifier by replacing defective components, making fine and coarse tap setting adjustments, and documenting the rectifier maintenance. The course also describes how to recognize and react to abnormal operating conditions (AOCs) that may be encountered. (35 min)

- **ASME-0121 Collect Sample for Internal Corrosion Monitoring**

Examine the collection and handling of natural gas samples for internal corrosion monitoring. Liquid and solid sample collection are also discussed, as are task documentation and potential abnormal operating conditions (AOCs). (30 min)

- **ASME-0131 Insert and Remove Coupons/Probes for Internal Corrosion Monitoring**

Insert and Remove Coupons/Probes explains how to insert and remove corrosion coupons/probes, including preparations, coupon insertion/removal procedures, and task documentation. The course also addresses potential abnormal operating conditions (AOCs). (15min)

- **ASME-0141 Perform Visual Inspection for Atmospheric Corrosion**

Visual Inspection for Atmospheric Corrosion explains the purpose of visual inspections for atmospheric corrosion, illustrates the types of coating failures, explains the procedure for visual inspections, and lists abnormal operating conditions (AOCs) that may be encountered while performing an inspection. (15 min)

- **ASME-0151 Perform Visual Inspection of Buried Pipe and Components When Exposed**

Perform Visual Inspection of Buried Pipe and Components When Exposed explains the purpose of the inspection; defines the terms related to external corrosion, coatings, coating anomalies, and coating methods; explains the procedure for the inspection; and discusses abnormal operating conditions (AOCs) that may be encountered during the task. (20 min)

- **ASME-0161 Perform Visual Inspection for Internal Corrosion**

Perform Visual Inspection for Internal Corrosion illustrates various anomalies that may be discovered while visually inspecting the internal surfaces of a pipe or component. The types of corrosion discussed in the course include pitting, scale, and microbiologically influenced corrosion (MIC). The course explains the basic steps of the inspection process, including how to document the location of each anomaly. It also describes how to recognize and react to abnormal operating conditions (AOCs). (15 min)

- **ASME-0171 Measure External Corrosion**

Measure External Corrosion describes various types of corrosion and explains the procedure for measuring external corrosion on steel pipe. The procedure includes information about preparing the pipe surface, creating a paper representation of the pipe surface, overlaying a grid on corroded areas of steel pipe, taking measurements of external corrosion, and documenting findings. The course also describes how to recognize and react to abnormal operating conditions (AOCs) that may be encountered. (25 min)

- **ASME-0181 Measure Internal Corrosion**

Measure Internal Corrosion describes various types of corrosion and explains the procedure for measuring internal corrosion on steel pipe. The procedure includes information about preparing the pipe surface, taking measurements of internal corrosion, mapping the corrosion on the pipe surface, and documenting and reporting findings. The course also describes how to recognize and react to abnormal operating conditions (AOCs) that may be encountered. (30 min)

- **ASME-0191 Measure Atmospheric Corrosion**

Measure Atmospheric Corrosion examines types and characteristics of atmospheric corrosion on aboveground pipelines, surface preparations, equipment checks, measurement methods, and abnormal operations conditions (AOCs) that may be encountered when measuring atmospheric corrosion. (30 min)

- **ASME-0201 Perform Visual Inspection of Installed Pipe and Components for Mechanical Damage**

Perform Visual Inspection of Installed Pipe and Components for Mechanical Damage explains the purpose of visually inspecting installed pipe for mechanical damage, terms related to mechanical damage, the procedure for visually inspecting installed pipe and components for mechanical damage, and how to recognize and react to any abnormal operating conditions (AOCs) that may be encountered while performing the procedure. (15 min)

- **ASME-0211 Measure and Characterize Mechanical Damage on Installed Pipe and Components**

Measure and Characterize Mechanical Damage on Installed Pipe and Components explains the purpose and procedure for measuring and characterizing mechanical damage, defines terms regarding mechanical damage, discusses tools and documentation requirements, and describes abnormal operating conditions (AOCs) that may be encountered while doing the inspection. (15 min)

- **ASME-0221 Inspect, Test, and Maintain Sensing Devices**

Inspect, Test, and Maintain Sensing Devices explains the purpose and different types of sensing devices, any knowledge that may be helpful, the procedure for performing a visual inspection, testing with the proper test media, recalibrating the range and setpoint of a sensing device, and potential abnormal operating conditions (AOCs) that may be encountered when performing the task. (15 min)

- **ASME-0231 Inspect, Test, and Maintain Programmable Logic Controllers (PLC)**

Inspect, Test, and Maintain Programmable Logic Controllers (PLC) explains how to check the test equipment, visually inspect PLCs for damage, isolate and test them for proper operation, maintain them as needed, and return them to service. Abnormal operating conditions (AOCs) that may be encountered while performing this task are included. (15 min)

- **ASME-0241 Inspect, Test, and Maintain Liquid Leak Detection Flow Computers**

Inspect, Test, and Maintain Liquid Leak Detection Flow Computers examines how flowmeters and other devices interface with flow computers as part of a CPM system designed to detect pipeline leaks. The inspection, testing, and maintenance of these systems are discussed, as are abnormal operating conditions (AOCs) that could be encountered during these procedures. (15 min)

- **ASME-0251 Inspect, Test, and Maintain Overfill Protection Systems**

Explain the purpose of inspecting, testing and maintaining overfill protection systems, knowledge required to inspect, test and maintain overfill protection systems, and abnormal operating conditions (AOCs) that may occur while performing the task. (20 min)

- **ASME-0261 Inspect, Test, and Maintain Tank Gages for Hazardous Liquid Leak Detection**

Explain the purpose of inspecting, testing, and maintaining tank gauging for hazardous liquid leak detection, the knowledge needed to accomplish the task, the steps for performing the task, and abnormal operating conditions (AOCs) that may occur while performing the task. (20 min)

- **ASME-0271 Prove Flowmeters for Hazardous Liquid Leak Detection**

Prove Flowmeters for Hazardous Liquid Leak Detection examines the use of master meters and conventional displacement provers for proving flowmeters for hazardous liquid leak detection. Displacement provers that are discussed include unidirectional, bidirectional, and compact meters. The course also examines abnormal operating conditions (AOCs) that may be encountered. (25 min)

- **ASME-0281 Maintain Flowmeters for Hazardous Liquid Leak Detection**

Maintain Flowmeters for Hazardous Liquid Leak Detection discusses the different types of flowmeters, including orifice plate, turbine, positive displacement, Coriolis, ultrasonic, magmeter, and vortex. The course also explores steps to take for flowmeter maintenance, including meter repair and removal. In addition, you will learn how to react to abnormal operating conditions (AOCs) you may encounter when maintaining flowmeters. (25 min)

- **ASME-0291 Inspect, Test, and Maintain Gravimeters/Densitometers For Hazardous Liquid Leak Detection**

Inspect, Test, and Maintain Gravimeters/Densitometers for Hazardous Liquid Leak Detection explains qualifications and knowledge required, initial inspection, maintenance, and returning the instruments to service. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (20 min)

- **ASME-0301 Open and Close Valves Manually**

Open and Close Valves Manually explores the manual operation of valves by using tools and also by manually operating actuators. The course includes preparations for the task, impact of pressure changes as a result of manual operation, and abnormal operating conditions (AOCs) that could be encountered during the task. (20 min)

- **ASME-0311 Operate Valves Manually to Adjust Flow/Pressure and Monitor for Changes**

Operate Valves Manually to Adjust Flow/Pressure and Monitor for Changes describes how to prepare for manual operation of valves and explains the processes for adjusting and monitoring flow or pressure. The course describes valve types, such as gate and ball valves; manual and mechanical methods of operation to make adjustments; how to verify that the anticipated flow or pressure is achieved; and how to monitor to ensure that flow and pressure remain within acceptable limits. The course also describes how to document the adjustment or monitoring of flow or pressure and how to recognize and react to abnormal operating conditions (AOCs). (25 min)

- **ASME-0321 Perform Valve Corrective Maintenance**

Perform Valve Corrective Maintenance describes how to prepare for valve corrective maintenance and discusses the types of maintenance that may need to be performed, such as making repairs, replacing parts, flushing the valve, making adjustments, and lubricating the valve. The course also describes how to document the valve corrective maintenance and how to recognize and react to abnormal operating conditions (AOCs). (20 min)

- ASME-0331 Perform Valve Visual Inspection and Partial Operation**

Perform Valve Visual Inspection and Partial Operation describes the purpose of a visual inspection and partial operation of pipeline valves, explains how to visually inspect and partially operate valves, discusses how to perform routine lubrication of valves, and lists abnormal operating conditions (AOCs) that may be encountered while performing the task. (15 min)

- ASME-0341 Perform Valve Preventive Maintenance**
Perform Valve Preventive Maintenance describes how to prepare for valve preventive maintenance and explains the steps for maintenance that may need to be performed, such as inspecting and replacing stem packing, winterizing valves, injecting a corrosion inhibitor, injecting a valve sealant/flush, and lubricating the valve. The course also describes how to document the valve preventive maintenance and how to recognize and react to abnormal operating conditions (AOCs). (25 min)

- ASME-0351 Inspect, Test, And Maintain Pneumatic Actuator/Operator**
 Inspect, Test, and Maintain Pneumatic Actuator/Operator explains how to perform a visual inspection, conduct preventive and corrective actions, adjust setpoints, and conduct a performance test on actuators/operators. Abnormal operating conditions (AOCs) that may be encountered during the task are also discussed. (15 min)

- ASME-0361 Inspect, Test, and Maintain Electric Actuator/Operator**
 Inspect, Test, and Maintain Electric Actuator/Operator explains how to perform a visual inspection, conduct preventive and corrective actions, adjust setpoints, and conduct a performance test on actuators/operators. Abnormal operating conditions (AOCs) that may be encountered during the task are also discussed. (15 min)

- ASME-0371 Inspect, Test, and Maintain Hydraulic Actuator/Operator**

Inspect, Test, and Maintain Hydraulic Actuator/Operator explains how to perform a visual inspection, conduct preventive and corrective actions, adjust setpoints, and conduct a performance test on actuators/operators. Abnormal operating conditions (AOCs) that may be encountered during the task are also discussed. (15 min)

- ASME-0381 Inspect, Test, and Maintain Spring-Loaded Pressure-Regulating Device**

Inspect, Test, and Maintain Spring-Loaded Pressure-Regulating Device explains the purpose of inspecting and maintaining regulators; describes how to inspect, test, and maintain them; and discusses how to recognize and react to abnormal operating conditions (AOCs) that may be encountered during the task. (15 min)

- ASME-0391 Inspect, Test, and Maintain Pilot-Operated Pressure-Regulating Device**

Inspect, Test, and Maintain Pilot-Operated Pressure-Regulating Device explains the purpose of regulator inspection and maintenance; describes how to inspect, test, and maintain pilot-operated, pressure-regulating devices; and discusses how to recognize and react to abnormal operating conditions (AOCs) that may be encountered while performing the task. (15 min)

- ASME-0401 Inspect, Test, and Maintain Controller-Type Pressure-Regulating Device**

Inspect, Test, and Maintain Controller-Type Pressure-Regulating Device explains the purpose of inspections and maintenance; describes how to inspect, test, and maintain controller-type, pressure-regulating devices; and discusses how to recognize and react to abnormal operating conditions (AOCs) that may be encountered while performing the task. (15 min)

- ASME-0411 Inspect, Test, and Maintain Spring-Loaded, Pressure-Limiting, or Pressure-Relief Device**

Inspect, Test, and Maintain Spring-Loaded, Pressure-Limiting, or Pressure-Relief Device explains the purpose and steps for inspecting a relief device, describes preventive and corrective maintenance, and discusses how to recognize and react to abnormal operating conditions (AOCs) that may be encountered while performing the task. (15 min)

- ASME-0421 Inspect, Test, and Maintain Pilot-Operated, Pressure-Limiting, or Pressure-Relief Device**

Inspect, Test, and Maintain Pilot-Operated, Pressure-Limiting, or Pressure-Relief Device explains the purpose and steps for inspecting a relief device, describes preventive and corrective maintenance, and discusses abnormal operating conditions (AOCs) that may be encountered while performing the task. (15 min)

- ASME-0431 Inspect, Test, and Maintain Pneumatic-Loaded, Pressure-Limiting, or Pressure-Relief Device**

Inspect, Test, and Maintain Pneumatic-Loaded, Pressure-Limiting, or Pressure-Relief Device explains the purpose and steps for inspecting a relief device, describes preventive and corrective maintenance, and discusses how to recognize and react to abnormal operating conditions (AOCs) that may be encountered while performing the task. (15 min)

- ASME-0551 Inspect, Test, and Maintain Fixed Explosive Atmosphere Detection and Alarm System**

Inspect, Test, and Maintain Fixed Explosive Atmosphere Detection and Alarm System explains the purpose of the detection and alarm system and discusses how to visually inspect the system, verify the current readings, and conduct a performance test of the system. It also covers corrective maintenance steps and describes abnormal operating conditions (AOCs) that may be encountered during the task. (15 min)

- **ASME-0561 Perform Pressure Test Using a Nonliquid Medium – MAOP Less Than 100 psi**
Perform Pressure Test Using a Nonliquid Medium - MAOP Less Than 100 psi explains how to pressure-test a pipeline that has a maximum allowable operating pressure (MAOP) less than 100 psi by using a nonliquid medium, such as air or inert gas. You will also learn about test preparations and design, recordkeeping, and abnormal operating conditions (AOCs) that you may encounter while conducting the test. (15 min)
- **ASME-0571 Perform Pressure Test Using a Nonliquid Medium – MOAP Greater Than or Equal to 100 psi**
Perform Pressure Test Using a Nonliquid Medium - MAOP Greater Than or Equal to 100 psi explains how to pressure-test a pipeline that has a MAOP greater than or equal to 100 psi by using a nonliquid medium, such as air or inert gas. You will also learn about test preparations and design, recordkeeping, and abnormal operating conditions (AOCs) that you may encounter while conducting the test. (15 min)
- **ASME-0581 Perform Pressure Test Using a Liquid Medium**
Perform Pressure Test Using a Liquid Medium explains how to pressure-test a pipeline using a liquid medium, such as water or another liquid medium designated by the operator. It also provides information about test preparations and design, recordkeeping, and abnormal operating conditions (AOCs) that you may encounter while conducting the pressure test. (10 min)
- **ASME-0591 Perform Leak Test at Operating Pressure**
Perform Leak Test at Operating Pressure examines leak testing of pipelines at operating pressure, including the importance of tight pipeline connections and leak-free components; calibration, certification, and testing of equipment or media; and using leak-detection equipment. Recognizing and reacting to abnormal operating conditions (AOCs) is also discussed.
- **ASME-0641 Perform Visual Inspection of Pipe and Components Prior to Installation**
Perform Visual Inspection of Pipe and Components Prior to Installation explains the importance of inspection of pipe and pipe components, possible defect terms, the procedure for the inspection, and possible abnormal operating conditions (AOCs) that could be encountered while performing the inspection. (15 min)
- **ASME-0651 Perform Visual Inspection of Breakout Tanks**
Explain the purpose of a breakout tank visual inspection, the knowledge required to perform a visual inspection, the steps for performing a visual inspection, and abnormal operating conditions (AOCs) that may occur when doing an inspection. (15 min)
- **ASME-0671 Join Plastic Pipe Using Solvent Cement**
Join Plastic Pipe Using Solvent Cement explains the purpose of joining plastic pipe with solvent cement, lists the materials needed, describes how to prepare and make the connection, discusses how to inspect the connection, and lists abnormal operating conditions (AOCs) that may be encountered. (10 min)
- **ASME-0681 Join Plastic Pipe Using Stab Fittings**
Join Plastic Pipe Using Stab Fittings explains the purpose of joining plastic pipe with stab fittings, materials needed, preparing for the connection, making the connection, and inspecting the connection. It also discusses abnormal operating conditions (AOCs) that may be encountered during the task. (10 min)
- **ASME-0691 Join Pipe Using Nonbottom-Out Compression Couplings**
Join Pipe Using Nonbottom-Out Compression Couplings examines the procedure for joining pipe 2 inches or less in outside diameter with nonbottom-out compression couplings. It lists the tools you will need to join pipe and what inspection of the completed joint involves. Abnormal operating conditions (AOCs) that may be encountered when joining pipe with nonbottom-out compression couplings are also discussed. (15 min)
- **ASME-0701 Join Pipe Using Bottom-Out Compression Couplings**
Join Pipe Using Bottom-Out Compression Couplings examines the procedure for joining pipe 2 inches or less in outside diameter with bottom-out compression couplings. It explores how to join the pipe sections with the coupling and what inspection of the completed joint involves. Abnormal operating conditions (AOCs) that you may encounter when joining pipe with bottom-out compression couplings are also discussed. (15 min)
- **ASME-0711 Join Pipe Using Compression Couplings**
Join Pipe Using Compression Couplings explores the selection and use of compression couplings for joining pipe greater than 2 inches in diameter. The course also includes preparation of the pipe and couplings, installation of the coupling, and inspection of the installed coupling. Abnormal operating conditions (AOCs) are also discussed. (15 min)
- **ASME-0721 Join Pipe Using Threaded Joints**
Join Pipe Using Threaded Joints explores how to join pipe with a threaded fitting and inspect the completed joint. The course examines key concepts such as pipe wall thickness and grade, diameter, thread type, pressure rating, and material. Pipe and thread standards are also discussed, as are defects that could occur in a completed joint. Abnormal operating conditions (AOCs) are also discussed. (20 min)
- **ASME-0731 Join Pipe Using Flange Assembly**
Join Pipe Using Flange Assembly examines the steps necessary to assemble flanges, bolt them in sequence, and apply the proper torquing. Types of flanges and gaskets are discussed as are preparations for flange assembly and inspection of the completed assembly. Abnormal operating conditions (AOCs) are also discussed. (20 min)

- **ASME-0751 Join Plastic Pipe Using Manual Butt Heat Fusion**

Join Plastic Pipe Using Manual Butt Heat Fusion describes how to join plastic pipe using the butt fusion manual method. It walks the learner through the steps of the butt fusion process, including tool selection, pipe preparation, and the heating phase. It also describes a proper and improper butt fusion joint. Abnormal operating conditions (AOCs) are also discussed. (20 min)

- **ASME-0761 Join Plastic Pipe Using Hydraulic Butt Heat Fusion**

Join Plastic Pipe Using Hydraulic Butt Heat Fusion describes how to join plastic pipe using the butt fusion manual method using a hydraulic machine. It walks the learner through the steps of the butt fusion process, including tool selection, pipe preparation, and the heating phase. It also describes qualities of a properly fused joint. Abnormal operating conditions (AOCs) are also discussed. (25 min)

- **ASME-0771 Join Plastic Pipe Using Sidewall Heat Fusion**

Join Plastic Pipe Using Sidewall Heat Fusion discusses the purpose of the sidewall heat fusion method of joining plastic pipe and the associated steps of the task, including preparation of the equipment, pipe, and fitting, as well as the heating and fusion process. It also describes a proper and improper heat fusion joint and lists common problems and causes of failed joints. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (25 min)

- **ASME-0781 Join Plastic Pipe Using Electrofusion**

Join Plastic Pipe Using Electrofusion discusses the electrofusion method of joining plastic pipe and the associated steps of the task, including the required preparation and the clamping and fusion process. It also describes proper and improper heat fusion and lists common problems and causes of failed joints or connections. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (30 min)

- **ASME-0791 Join Plastic Pipe Using Socket Heat Fusion**

Join Plastic Pipe Using Socket Heat Fusion discusses the purpose of the socket heat fusion method and the associated steps of the task, including preparation of the equipment, pipe, and fitting, as well as the heating and fusion process. It also describes a proper and improper socket heat fusion joint and lists common problems and causes of failed joints. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (20 min)

- **ASME-0811 Perform Visual Inspection of Welding and Welds**

Perform Visual Inspection of Welding and Welds explains the requirements for welding inspection qualification, the identification of the welding procedure, visual inspections of welds in progress and the final weld, and abnormal operating conditions (AOCs) that may be encountered during the task. (20 min)

- **ASME-0821 Install Tubing and Fittings**

Tubing and Fitting Installation: Instrument, Control, and Sampling examines the service requirements for tubing installation, the adequacy of tubing and fittings for the intended service, and installation of tubing and fittings, including tube cutting and bending, and joining of tubing and fittings. Abnormal operating conditions (AOCs) are also discussed. (25 min)

- **ASME-0831 Install and Maintain Mechanical Leak Clamps on Cast Iron Caulked Bell and Spigot Joints**

Install and Maintain Mechanical Leak Clamps on Cast Iron Caulked Bell and Spigot Joints describes a cast iron caulked bell and spigot joint and discusses the installation of mechanical leak clamps to prevent leakage from these joints. Abnormal operating conditions (AOCs) are also discussed. (15 min)

- **ASME-0861 Install Steel Pipe in a Ditch**

Installation of Steel Pipe in a Ditch discusses how to properly install steel pipe in a ditch. Discussion points include proper pipe handling procedures, ditch and pipe inspection, pipe installation, backfill preparations, and abnormal operating conditions (AOCs). (20 min)

- **ASME-0871 Install Steel Pipe in a Bore**

Installation of Steel Pipe in a Bore discusses the purpose for installing a steel pipe in a bore, as well as proper pipe handling, inspection of pipe and coating, the pull-in method into the bore, and the proper clearance and deflection angle of the pipe. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (20 min)

- **ASME-0881 Install Steel Pipe Through Plowing/Pull-In**

Install Steel Pipe Through Plowing/Pull-In explains the plowing/pull-in method for installing steel pipe, including preparing the pipe and equipment, inspecting exposed pipe and its coating, placing and attaching the pipe, and plowing the pipe into the ground. Abnormal operating conditions (AOCs) are also discussed. (15 min)

- **ASME-0891 Perform Field Bending of Steel Pipe**

Perform Field Bending of Steel Pipe explains how to perform field bending of steel pipe, including proper pipe preparation and equipment setup, the procedure for field bending steel pipe, and post-procedure inspection. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (20 min)

- **ASME-0901 Install Plastic Pipe in a Ditch**

Install Plastic Pipe in a Ditch explains how to properly handle the plastic pipe, what to look for when inspecting the ditch and the pipe, how to install the pipe and tracer wire, how to inspect the installed pipe, and what to include in the required documentation. Abnormal operating conditions (AOCs) that may be encountered during the task are also discussed. (15 min)

- **ASME-0911 Install Plastic Pipe in a Bore**

Install Plastic Pipe in a Bore explains how to properly handle the plastic pipe, install the pipe in a bore without damaging the pipe, visually inspect the pipe after installation, and document the task. Abnormal operating conditions (AOCs) that may be encountered while performing the task are also discussed. (10 min)

- **ASME-0921 Install Plastic Pipe Through Plowing/Pull-In**
Install Plastic Pipe Through Plowing/Pull-In explains how to properly handle the plastic pipe, install the pipe using the plowing/pull-in method, visually inspect the pipe after installation, and document the task. Abnormal operating conditions (AOCs) that may be encountered while performing the task are also discussed. (10 min)
- **ASME-0931 Install Plastic Pipe Through Plowing/Planting**
Install Plastic Pipe Through Plowing/Planting explains the purpose of burying plastic pipe and discusses pipe selection and handling precautions. It also describes the plowing/planting method for burying the plastic pipe. Documentation and abnormal operating conditions (AOCs) that may be encountered during the task are also discussed. (10 min)
- **ASME-0935 Relocate a Pipeline**
Relocate a Pipeline explains reasons you would move a pipeline, describes the preparation work to relocate a pipeline, including pressure monitoring, and discusses the process of moving a pipeline. It also lists post inspection points and related abnormal operating conditions (AOCs) that may be encountered when relocating a pipeline. (15 min)
- **ASME-0941 Install Tracer Wire**
Install Tracer Wire explains the purpose of tracer wire for plastic pipe, how to install tracer wire, how to test the mechanical integrity and continuity after the wire is installed, and how to recognize and react to abnormal operating conditions (AOCs) that may be encountered during the task. (10 min)
- **ASME-0951 Install Pipe Aboveground**
Install Pipe Aboveground explains requirements for installing pipe aboveground, including the proper handling of pipe, anchor and support requirements, and inspections points. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (20 min)
- **ASME-0961 Inspect and Maintain Aboveground Supports and Anchors**
Inspect and Maintain Aboveground Supports and Anchors explains the purpose of inspecting and maintaining above-ground pipe supports and anchors, and the procedure for inspecting and maintaining above-ground pipe supports and anchors. Abnormal operating conditions (AOCs) are also discussed. (15 min)
- **ASME-0971 Install & Maintain Casing Spacers, Vents, and Seals**
Install and Maintain Casing Spacers, Vents, and Seals describes the basic components of casing systems and explains the procedures for installing and maintaining casing spacers, vents, and seals. The procedures provide basic installation guidelines, identify what to look for when visually inspecting the installation, explain how to perform maintenance to correct issues discovered during routine surveys and patrols, and describe how to document the installation and maintenance. The course also describes how to recognize and react to abnormal operating conditions (AOCs) that may be encountered. (25 min)
- **ASME-0981 Perform Backfilling**
Perform Backfilling identifies materials that are unsuitable for backfilling a trench following pipeline maintenance. The course explains the procedure for backfilling a trench, including backfilling in lifts, tamping, and installing pipe protective material. It also describes how to document the task performance details and how to recognize and react to abnormal operating conditions (AOCs) that may be encountered. (20 min)
- **ASME-0991 Apply or Repair Brushed or Rolled Coatings**
Apply or Repair Brushed or Rolled Coatings explains how to apply protective coating to pipes, tanks, and other industrial surfaces using the brushed and rolled application techniques. The course also covers proper surface preparation, proper application techniques, and visual inspection points. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (30 min)
- **ASME-1001 Apply or Repair Sprayed Coatings**
Apply or Repair Sprayed Coatings explains how to apply protective coating to pipes, tanks, and other industrial surfaces using the sprayed application technique. The course also covers surface preparation, proper application technique, and visual inspection points. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (25 min)
- **ASME-1011 Apply or Repair Wrapped Coatings**
Apply or Repair Wrapped Coatings explains how to apply protective coating to pipes, tanks, and other industrial surfaces using the wrapped application technique. The course also covers surface preparation, proper application technique, and visual inspection points. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (25 min)
- **ASME-1020 Perform Electrical Inspection of Pipe Coating (Holiday Detection or Jeeping)**
Perform Electrical Inspection of Pipe Coating (Holiday Detection or Jeeping) examines the instrumentation and procedures for electrically inspecting (jeeping) pipe for coating anomalies such as holidays and pinholes. Abnormal operating conditions (AOCs) are also discussed. (20 min)
- **ASME-1041 Install Bolted Mechanical Clamps and Sleeves**
Install Bolted Mechanical Clamps and Sleeves describes how to prepare for the installation of bolt-on mechanical clamps and sleeves, discusses precautions and installation procedures, and lists what to look for when inspecting installed clamps or sleeves. The course also describes how to recognize and react to abnormal operating conditions (AOCs) that may be encountered. (15 min)
- **ASME-1051 Fit-Up Weld-Type Repair Sleeves**
Fit-Up Weld-Type Repair Sleeve explains the purpose for weld-type repair sleeves, the preparations required for fitting up weld-type sleeves, how to properly fit up weld-type sleeves, and abnormal operating conditions (AOCs) that may be encountered during the task. (10 min)

- **ASME-1071 Repair Steel Pipe by Grinding**
 Repair Steel Pipe by Grinding explains the purpose of grinding steel pipe for repairs, the importance of measuring pipe wall thickness, the steps for removing defects by grinding, and abnormal operating conditions (AOCs) that may be encountered during grinding. (10 min)
- **ASME-1081 Tap a Pipeline (Tap Diameter 2 in. and Less)**
 Tap a Pipeline (Tap Diameter 2 in. and Less) explains the purpose of performing a pipeline tap, states the difference between a hot tap and a tap, lists the preparation work needed before the tap, describes how to perform a hot tap (including fitting alignment and installing and removing the tap machine), and lists abnormal operating conditions (AOCs) that may be encountered while performing a tap. (15 min)
- **ASME-1091 Tap a Pipeline (Tap Diameter Greater Than 2 in.)**
 Tap a Pipeline (Tap Diameter Greater Than 2 in.) explains the purpose of a hot tap, how to prepare for a hot tap, the steps for performing a hot tap, and abnormal operating conditions (AOCs) that may be encountered during the task. (15 min)
- **ASME-1101 Tap a Pipeline With a Built-In Cutter**
 Tap a Pipeline With a Built-In Cutter explains the purpose of performing a pipeline tap, states the difference between a hot tap and a tap, describes how to perform a tap using a fitting with a built-in cutter, and lists abnormal operating conditions (AOCs) that may be encountered while performing a tap. (15 min)
- **ASME-1111 Tap Cast and Ductile Iron Pipe and Low-Pressure Steel Pipe**
 Tapping Cast and Ductile Iron Pipe and Low-Pressure Steel Pipe explains the purpose of hot taps; how to prepare for a hot tap; the steps for performing a hot tap, including preparations and pressure testing; and abnormal operating conditions (AOCs) that may be encountered during the task. (15 min)
- **ASME-1121 Install, Monitor, and Remove Bags or Stoppers in Low-Pressure Pipe**
 Install, Monitor, and Remove Bags or Stoppers in Low-Pressure Pipe explains how to perform bagging and stopping of low-pressure pipe, including the insertion and removal of a gas bag to temporarily discontinue service for repairs, as well as monitoring pressure to maintain system requirements during the task. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (30 min)
- **ASME-1131 Perform Stopping of Pipe**
 Perform Stopping of Pipe explains the purpose of stopper line stopping, preparations for line stopping, installing and operating line stopping equipment, installing completion plugs, and abnormal operating conditions (AOCs) that may be encountered during the task. (15 min)
- **ASME-1141 Squeeze Off Plastic Pipe**
 Squeeze Off Plastic Pipe explains why squeezing off plastic pipe is necessary, how to make preparations to squeeze off plastic pipe, how to install the squeeze-off tool, how to perform a squeeze-off of plastic pipe, and potential abnormal operating conditions (AOCs) that may be encountered while performing the task. (15 min)
- **ASME-1151 Squeeze Off Steel Pipe**
 Squeeze Off Steel Pipe examines what to watch for when installing a squeeze-off tool on steel pipe, the required equipment, the general squeeze-off procedure, pressure monitoring during squeeze-off, and abnormal operating conditions (AOCs) that you may encounter during the procedure. (20 min)
- **ASME-1161 Install Residential and Small Commercial Meters and Regulators**
 Install Residential and Small Commercial Meters and Regulators explains how to install natural gas meters and regulators for homes and small commercial operations. Parts of a meter set, regulator and meter operation, meter set assembly and verification, overpressure protection, gas testing, and abnormal operating conditions (AOCs) are also examined. (25 min)
- **ASME-1171 Install Large Commercial and Industrial Meters and Regulators**
 Install Large Commercial and Industrial Meters and Regulators explains how to install customer meters for large commercial and industrial operations. Topics include meter set components, selection, assembly, support, and purging; meter and regulator operation; pressure and leak testing; and abnormal operating conditions (AOCs). (25 min)
- **ASME-1181 Install and Maintain Large Commercial & Industrial Pressure-Regulating, Pressure-Limiting, or Pressure-Relief Devices**
 Install and Maintain Large Commercial & Industrial Pressure-Regulating, Pressure-Limiting, or Pressure-relief Devices explains the purpose of and procedure for installing and maintaining pressure-regulating, pressure-limiting, and pressure-relief devices. It also discusses visual inspections, testing, and abnormal operating conditions (AOCs) that may be encountered during the task. (15 min)
- **ASME-1191 Maintain Service Valve Upstream of Customer Meter**
 Maintain Service Valve Upstream of Customer Meter explains the purpose of the maintenance, visual inspections, maintenance and operation of the valve, and abnormal operating conditions (AOCs) that may be encountered during the task. (10 min)
- **ASME-1201 Isolate Service Lines Temporarily Including Service Discontinuance**
 Isolate Service Lines Temporarily Including Service Discontinuance discusses how to temporarily disconnect a service line, including how to identify the appropriate meter, close the gas riser valve, install a standard service lock, and cut and cap the line when required. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (20 min)

- **ASME-1211 Perform Periodic Sampling of Odorization**
Perform Periodic Sampling of Odorization teaches the user the steps to conduct periodic samples of the odorant concentration in a natural gas. The user will learn how to locate the testing site, how to perform a sniff test, and how to recognize conditions that may interfere with odorant testing. Abnormal operating conditions (AOCs) are also discussed. (20 min)
- **ASME-1221 Inspect, Test, and Maintain Odorizer**
Inspect, Test, and Maintain Odorizer examines the inspection, testing, and maintenance of odorization systems after installation or replacement and prior to or during placing in service. Types of odorization systems, gas and odorant detection instruments, and abnormal operating conditions (AOCs) are also discussed. (20 min)
- **ASME-1231 Perform Inside Gas Leak Investigation**
Perform Inside Gas Leak Investigation explains the purpose of an inside gas leak investigation, how to verify the test equipment needed for the investigation, what to look for when conducting the gas leak investigation, and what precautions to take during the investigation. Abnormal operating conditions (AOCs) that may be encountered during the task are also discussed. (10 min)
- **ASME-1241 Perform Outside Gas Leak Investigation**
Perform Outside Gas Leak Investigation explains the purpose of an outside gas leak investigation, how to verify the test equipment needed for the investigation, what to look for when conducting the gas leak investigation, and what precautions to take during the investigation. Abnormal operating conditions (AOCs) that may be encountered during the task are also discussed. (10 min)
- **ASME-1251 Perform Hazardous Liquid Leak Investigation**
Perform Hazardous Liquid Leak Investigation explains the purpose of the investigation and the initial information required. It also discusses how to assess the suspected leak area, what to do if a leak is discovered, how to make the area safe, and whom to notify. Abnormal operating conditions (AOCs) that may be encountered during the task are also discussed. (15 min)
- **ASME-1261 Perform Walking Gas Leakage Survey**
Perform Walking Gas Leakage Survey explains the purpose of the gas leakage survey, the steps for inspecting the portable test equipment, what to look for when conducting the gas leakage survey, and how to document the survey. It also discusses abnormal operating conditions (AOCs) that may be encountered during the task. (10 min)
- **ASME-1271 Perform Mobile Gas Leakage Survey**
Explains the purpose of a mobile gas leakage survey, the knowledge required to perform the task, the steps for performing a mobile gas leakage survey, and abnormal operating conditions (AOCs) that may occur while performing the survey. (15 min)
- **ASME-1285 Inspect Water Crossing**
Address visual inspection of water crossings, including underwater pipeline facilities, crossing conditions, and adjacent banks. Inspection by instrumentation and diving is addressed as are potential abnormal operating conditions (AOCs). (25min)
- **ASME-1291 Locate Underground Pipelines**
Locating Underground Pipelines examines the procedure for locating underground pipelines, including placement of temporary markers. The course also discusses the One-Call system, use of maps and records, types of locating methods, types of temporary markers, the APWA Universal Color Code, and abnormal operating conditions (AOCs). (25 min)
- **ASME-1301 Install and Maintain Pipeline Markers**
Install and Maintain Pipeline Markers examines the location, placement, and maintenance of permanent pipeline markers, including types of markers, evaluation of existing markers, and preparation for installation. Abnormal operating conditions (AOCs) are also discussed. (25 min)
- **ASME-1311 Inspect Pipeline Surface Conditions by Patrolling Right-of-Way or Easement**
Inspect Pipeline Surface Conditions by Patrolling Right-of-Way or Easement explores preparations, procedures, and follow-up actions for inspection of pipeline right-of-ways, including signs of leaks, encroachments, and conditions that impact pipeline safety or integrity. Abnormal operating conditions (AOCs) that may be encountered are also addressed. (20 min)
- **ASME-1321 Perform Damage Prevention During Excavation Activities by or on Behalf of the Operator**
Perform Damage Prevention During Excavation Activities by or on Behalf of the Operator examines damage prevention activities before and during excavation, including verifying that underground pipelines are marked, providing required notification, using a spotter to guide equipment operator, and probing, digging, or potholing to verify location. Post-excavation task requirements and abnormal operating conditions (AOCs) are also discussed. (20 min)
- **ASME-1331 Perform Damage Prevention Insp. During Third-Party Excavation or Encroachment Activities as Determined Necessary by Operator**
Perform Damage Prevention Insp. During Third-Party Excavation or Encroachment Activities as Determined Necessary by Operator explores damage prevention activities prior to excavation, how to conduct the inspection, and how to recognize and react to abnormal operating conditions (AOCs). (20 min)
- **ASME-1341 Provide/Ensure Adequate Pipeline Support During Operator-Initiated Excavation Activities**
Provide/Ensure Adequate Pipeline Support During Operator-Initiated Excavation Activities examines supports for existing pipelines being excavated for maintenance or repair, including cribbing and earth plugs, and bridging and bracing. Abnormal operating conditions (AOCs) are also discussed. (15 min)

- **ASME-1351 Inspect and Maintain Vault**
 Inspect and Maintain Vault examines the requirements for inspecting and maintaining vaults that house pipeline system valves and other pressure-regulating or pressure-limiting equipment. The course also discusses confined space entry, vault covers and locking devices, structural integrity, drainage, venting, and vault maintenance. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (15 min)
- **ASME-1361 Inspect, Test, and Maintain Station Emergency Shutdown System**
 Inspect, Test, and Maintain Station Emergency Shutdown System examines inspection, testing, and corrective maintenance of emergency shutdown systems for compressor and pumping stations. The course also explains how emergency shutdown systems work and lists abnormal operating conditions (AOCs) that you may encounter when performing this task. (20 min)
- **ASME-1411 Perform Indirect Inspection**
 Perform Indirect Inspection examines four methods of indirect inspection for pipeline, including alternating and direct current voltage gradient surveys, close interval surveys, and soil resistivity tests. The types of tools needed for each technique as well as general methodology for each are discussed. Abnormal operating conditions (AOCs) that you may encounter when conducting indirect inspections are listed. (15 min)
- **ASME-1421 Direct Examination Techniques**
 Direct Examination Techniques addresses techniques used to assess damage in pipelines, including mechanical, coating, and corrosion damage. The course also explores task requirements, test equipment checks, direct examination, and documentation. The course also discusses abnormal operating conditions (AOCs) that may be encountered. (15 min)
- **ASME-1631 Launch or Receive Internal Devices (Pigs) With a Temporary Launcher or Receiver for Lines Not in Service**
 Discusses the circumstances and general procedures for launching or receiving devices (pigs) with temporary equipment for lines that are not in service. Potential abnormal operating conditions (AOCs) are also discussed. (20min)
- **ASME-1651 Perform Purging of Pipeline Facilities**
 Perform Purging of Pipeline Facilities explains the purpose of purging pipelines with natural gas, air, and inert gas; lists preparations for purging a pipeline; describes how to perform the purge; and discusses abnormal operating conditions (AOCs) that may be encountered. (15 min)
- **ASME-1661 Perform Purging of Hazardous Liquids Pipeline Facilities**
 Discuss actions to safely purge or drain down hazardous liquids pipeline facilities. The course addresses pipeline isolation, identification and correct staging of drain-down equipment, purging and post-purging procedures as well as potential abnormal operating conditions (AOCs). (15 min)
- **ASME-1681 Inspect, Test, and Maintain Liquid Knockout (Dehydration) System**
 Explain the purpose of liquid knockout (dehydration) systems, knowledge needed to inspect, test, and maintain liquid knockout (dehydration) systems, the steps for inspecting, testing and maintaining a dehydration system, and any abnormal operating conditions (AOCs) that may occur while performing the task. (10 min)