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"Where Questions Become Knowledge"

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API RP 1161 Hazardous Liquid Pipeline Operator Qualification

Library	Course Code	Course Name	Description and Length (in minutes) 3-18-24
API RP 1161			
API-Based Covered Tasks	CT-1.1	Measure Structure-to-Soil Potentials	<i>Measure Structure-to-Soil Potentials</i> 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-Based Covered Tasks	CT-1.2	Conduct a Close Interval Survey	<i>Conduct a Close Interval Survey</i> explains the knowledge required before conducting a close interval survey, the preparation required before the survey, and the steps to perform the survey. Abnormal operating conditions (AOCs) are also discussed. (20 min)
API-Based Covered Tasks	CT-1.4	Inspect and Perform Electrical Tests of Bonds	<i>Inspecting and performing electrical Tests of bonds</i> explains the purpose and types of electrical bonds, the knowledge required before inspecting and testing bonds, visual inspections, and electrical testing bonds. Abnormal operating conditions (AOCs) are also discussed. (15 min)

API-Based Covered Tasks	CT-1.5	Inspect and Test Electrical Isolation	<i>Inspect and Test Electrical Isolation</i> explains the use of insulating devices to electrically isolate two metal structures, the equipment needed, the steps taken for inspecting and testing electrical isolation, and any possible abnormal operating conditions (AOCs) that may be encountered. (15 min)
API-Based Covered Tasks	CT-2.1	Verify Test Lead Continuity	<i>Verify Test Lead Continuity</i> 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-Based Covered Tasks	CT-2.4	Install Test Leads by Exothermic Welding Methods	<i>Install Test Leads by Exothermic Welding Methods</i> 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-Based Covered Tasks	CT-3.0	Obtain a Voltage and Current Output Reading From a Rectifier to Verify Proper Performance	<i>Obtain a Voltage and Current Output Reading From a Rectifier to Verify Proper Performance</i> 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-Based Covered Tasks	CT-4.1	Troubleshoot Rectifier	<i>Troubleshoot Rectifier</i> explains the purpose of a rectifier and its components in a cathodic protection system, the knowledge required before troubleshooting a rectifier, the steps of troubleshooting, and possible abnormal operating conditions (AOCs). (15 min)
API-Based Covered Tasks	CT-4.3	Adjust Rectifier	<i>Adjust Rectifier</i> 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-Based Covered Tasks	CT-5.1	Examine for Mechanical Damage on Buried or Submerged Pipe	<i>Examine for Mechanical Damage on Buried or Submerged Pipe</i> explains the purpose of damage inspection, the 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-Based Covered Tasks	CT-5.2	Examine for External Corrosion on Buried or Submerged Pipe	<i>Examine for External Corrosion on Buried or Submerged Pipe</i> explains the purpose for inspection, the 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-Based Covered Tasks	CT-5.3	Inspect the Condition of External Coating on Buried or Submerged Pipe	<i>Inspect the Condition of External Coating on Buried or Submerged Pipe</i> explains the purpose of external coatings and the procedure for inspecting external coatings. Abnormal operating conditions (AOCs) are also discussed. (15 min)
API-Based Covered Tasks	CT-7.1	Perform Visual Inspection of Atmospheric Coatings	<i>Perform Visual Inspection of Atmospheric Coatings</i> explains the purpose of the atmospheric coatings inspections, the 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-Based Covered Tasks	CT-7.5	Apply Coating Using Hand Application Method	Apply Coating Using Hand Application Methods explains how to prepare and apply a protective coating to pipes, tanks, and other industrial surfaces using the brushed, rolled, wrapped, and heat-melt patching application methods. It also discusses proper application techniques and visual inspection points. (40 min)
API-Based Covered Tasks	CT-7.6	Apply Coating Using Spray Applications	Apply Coating Using Spray Applications explains how to apply a protective coating to pipes, tanks, and other industrial surfaces using the sprayed application technique. The course also covers proper application techniques and visual inspection points. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (25 min)

API-Based Covered Tasks	CT-7.7	Perform Coating Inspection	Performing Coating Inspection discusses the various inspection points and tests required to ensure the coating application meets quality standards. Coating inspection includes pipe preparation testing, coating application inspection, and quality testing after application. The course also describes the conditions to look for during a visual inspection of the coating. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (20 min)
API-Based Covered Tasks	CT-8.3	Measure Corroded Area	<i>Measure Corroded Area</i> identifies the knowledge and skills required for measuring a corroded area on a steel pipe, explains the measuring procedure, and describes possible abnormal operating conditions (AOCs). (20 min)
API-Based Covered Tasks	CT-9.5	Repair Shorted Casings	<i>Repair Shorted Casings</i> 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-Based Covered Tasks	CT-9.6	Install an Electrical Insulating Device	<i>Install Electrical Insulating Device</i> explains the purpose of installing insulating devices, the knowledge and skills required, the procedures for installing various insulating devices, and abnormal operating conditions (AOCs) that may be encountered during the process. (40 min)
API-Based Covered Tasks	CT-12.0	Perform a Visual Inspection of the Internal Pipe Surface	<i>Perform a Visual Inspection of the Internal Pipe Surface</i> , describe the types of corrosion and/or damage that may be discovered while visually inspecting an internal pipe surface, explain the inspection procedure, and describe possible abnormal operating conditions (AOCs). (20 min)

API-Based Covered Tasks	CT-14.1	Locate Line	<i>Locate Line</i> examines the procedure for locating pipelines, including using 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-Based Covered Tasks	CT-14.2	Install, Inspect, and Maintain Permanent Marker	<i>Install, Inspect, and Maintain Permanent Marker</i> 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-Based Covered Tasks	CT-14.5	Install, Inspect, and Maintain Temporary Marker	<i>Install, Inspect, and Maintain Temporary Marker</i> 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-Based Covered Tasks	CT-15.1	Perform Visual Inspection of Surface Conditions of Right-of-Way	<i>Perform Visual Inspection of Surface Conditions of Right-of-Way</i> discusses the steps necessary to visually inspect surface conditions of pipeline rights-of-way. Abnormal operating conditions (AOCs) are also discussed. (25 min)
API-Based Covered Tasks	CT-19.2	Perform Valve Lubrication	Perform Valve Lubrication explains the purpose of valve lubrication, how to perform valve lubrication, and abnormal operating conditions that may be encountered while performing valve lubrication. (10 min)

API-Based Covered Tasks	CT-19.5	Adjust Actuator/Operator, Electric	<i>Adjust Actuator/Operator: Electric</i> explains why we need to adjust the actuators/operators and describes the adjustments needed, such as limit switches, torque switches, and function tests. Discusses the procedure for making the adjustments and list any abnormal operating conditions (AOCs) that may be encountered while performing the task. (15 min)
API-Based Covered Tasks	CT-19.6	Adjust Actuator/Operator, Pneumatic	<i>Adjust Actuator/Operator, Pneumatic</i> 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-Based Covered Tasks	CT-19.7	Adjust Actuator/Operator, Hydraulic	<i>Adjust Actuator/Operator, Hydraulic</i> explains why we need to adjust actuators or operators, the type of adjustments needed, the procedure for the adjustments, and any abnormal operating conditions (AOCs) that may be encountered. (15 min)
API-Based Covered Tasks	CT-21.1	Repair Valve Actuator/Operator, Pneumatic	<i>Repair Valve Actuator/Operator, Pneumatic</i> explains the general steps for repairing a pneumatic actuator/operator, including disassembly, inspecting parts, replacing parts, and reassembling. Abnormal operating conditions (AOCs) may be encountered while performing the task are also discussed. (15 min)

API-Based Covered Tasks	CT-21.3	Perform Internal Inspection of Valves	Perform Internal Inspection of Valves Perform Internal Inspection of Valves discusses the purpose of performing an internal valve inspection and summarizes the basic types of valves and internal components. It also covers the task procedure, the conditions to look for during the inspection, and any abnormal operating conditions (AOCs) that may be encountered. (30 min)
API-Based Covered Tasks	CT-21.4	Repair Valve Actuator/Operator, Hydraulic	<i>Repair Valve Actuator/Operator, Hydraulic</i> explains the general steps for repairing a hydraulic actuator or operator, including disassembly, inspecting parts, replacing parts, and reassembling. Abnormal operating conditions (AOCs) may be encountered while performing the task are also discussed. (15 min)
API-Based Covered Tasks	CT-21.5	Repair Valve Actuator/Operator, Electric	<i>Repair Valve Actuator/Operator, Electric</i> explains the general steps for repairing an electric actuator or operator, including disassembly, inspecting parts, replacing parts, and reassembling. Abnormal operating conditions (AOCs) may be encountered while performing the task are also discussed. (15 min)
API-Based Covered Tasks	CT-22.2	Inspect, Test, and Calibrate HVL Tank Pressure Relief Valves	<i>Inspect, Test, and Calibrate HVL Tank Pressure Relief Valves</i> explains why relief valve inspection, testing, and calibration are 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-Based Covered Tasks	CT-23.1	Maintain/Repair Relief Valves	<i>Maintain/Repair Relief Valves</i> 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-Based Covered Tasks	CT-23.2	Inspect, Test, and Calibrate Relief Valves	<i>Inspect, Test, and Calibrate Relief Valves</i> explains why relief valve inspection, testing, and calibration are 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-Based Covered Tasks	CT-24.1	Maintain/Repair Pressure Limiting Devices	<i>Maintain/Repair Pressure Limiting Devices</i> 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 abnormal operating conditions (AOCs) that may be encountered during the task. (15 min)
API-Based Covered Tasks	CT-24.2	Inspect, Test, and Calibrate Pressure Limiting Devices	<i>Inspect, Test, and Calibrate Pressure Limiting Devices</i> 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-Based Covered Tasks	CT-25.1	Inspect, Test, and Calibrate Pressure Switches	<i>Inspect, Test, and Calibrate Pressure Switches</i> explains the purpose and different functions of pressure switches, the procedure for inspecting, testing, and calibrating a pressure switch, and abnormal operating conditions (AOCs) that may be encountered. (15 min)

API-Based Covered Tasks	CT-25.2	Inspect, Test, and Calibrate Pressure Transmitters	<i>Inspect, Test, and Calibrate Pressure Transmitters</i> explains the purpose and different types of pressure transmitters, the procedure for inspecting, testing, and calibrating a pressure transmitter, and abnormal operating conditions (AOCs) that may be encountered. (20 min)
API-Based Covered Tasks	CT-32.0	Observation of Excavation Activities	<i>Observation of Excavation Activities</i> examines the responsibilities of a qualified observer, excavation complexity, observation procedure, potential hazards, and abnormal operating conditions (AOCs) that may be encountered. (30 min)
API-Based Covered Tasks	CT-38.1	Perform Visual Inspection of Pipe and Pipe Components Before Installation	<i>Perform Visual Inspection of Pipe and Pipe Components Before Installation</i> . Explains the importance of the inspection, possible defects in pipe and components, the procedure for the inspection, and abnormal operating conditions (AOCs) that may be encountered. (15 min)
API-Based Covered Tasks	CT-38.3	Perform Visual Inspection of Welds	<i>Perform Visual Inspection of Welds</i> explains why welds should receive a visual inspection, the defects that may be found during a visual inspection, and abnormal operating conditions (AOCs) that may be encountered. (10 min)
API-Based Covered Tasks	CT-39.0	Backfilling a Trench Following Maintenance	<i>Backfilling a Trench Following Maintenance</i> 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-Based Covered Tasks	CT-25.2	Inspect, Test, and Calibrate Pressure Transmitters	<i>Inspect, Test, and Calibrate Pressure Transmitters</i> explains the purpose and different types of pressure transmitters, the procedure for inspecting, testing, and calibrating a pressure transmitter, and abnormal operating conditions (AOCs) that may be encountered. (20 min)
API-Based Covered Tasks	CT-32.0	Observation of Excavation Activities	<i>Observation of Excavation Activities</i> examines the responsibilities of a qualified observer, excavation complexity, observation procedure, potential hazards, and abnormal operating conditions (AOCs) that may be encountered. (30 min)
API-Based Covered Tasks	CT-38.1	Perform Visual Inspection of Pipe and Pipe Components Before Installation	<i>Perform Visual Inspection of Pipe and Pipe Components Before Installation</i> . Explains the importance of the inspection, possible defects in pipe and components, the procedure for the inspection, and abnormal operating conditions (AOCs) that may be encountered. (15 min)
API-Based Covered Tasks	CT-38.3	Perform Visual Inspection of Welds	<i>Perform Visual Inspection of Welds</i> explains why welds should receive a visual inspection, the defects that may be found during a visual inspection, and abnormal operating conditions (AOCs) that may be encountered. (10 min)
API-Based Covered Tasks	CT-39.0	Backfilling a Trench Following Maintenance	<i>Backfilling a Trench Following Maintenance</i> 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-Based Covered Tasks	CT-44.6	Maintain Flow Meters for Hazardous Liquid Leak Detection	<i>Maintain Flow Meters for Hazardous Liquid Leak Detection</i> lists types of flow meters and how they work. The course also examines the procedure for removing and repairing flow meters. Abnormal operating conditions (AOCs) are also discussed. (20 min)
API-Based Covered Tasks	CT-44.7	Inspect, Test, and Maintain Gravitometers/Densitometers for Hazardous Liquid Leak Detection	<i>Inspect, Test, and Maintain Gravitometers/Densitometers for Hazardous Liquid Leak Detection</i> . 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)
API-Based Covered Tasks	CT-44.8	Inspect, Test, and Maintain Temperature Transmitters for Hazardous Liquid Leak Detection	<i>Inspect, Test, and Maintain Temperature Transmitters for Hazardous Liquid Leak Detection</i> examines what is involved with the inspection, testing, and maintenance of temperature transmitters and lists abnormal operating conditions (AOCs) that may be encountered. (25 min)
API-Based Covered Tasks	CT-63.4	Operate Valves Locally on a Liquid Pipeline System	<i>Operate Valves Locally on a Liquid Pipeline System</i> discusses valves' local opening and closing by physical use of tools and local operation of actuators. Preparations, conditions, and steps for local operation of valves, as well as abnormal operating conditions (AOCs), are also discussed. (20 min)