



BODY OF KNOWLEDGE
API 1184 Pipeline Facility Construction Inspector
Certification Exam

August 2022, December 2022, and April 2023

API 1184 Pipeline Facility Construction Inspector must have a broad knowledge base relating to construction of new onshore transmission pipeline facility construction. This knowledge base, at a minimum, includes such topics as inspector responsibilities, general pipeline facilities construction inspection, inspector responsibilities, personnel and general facilities safety, environmental and pollution control. The API 1184 Pipeline Facility Construction Inspector Certification Exam is designed to determine if applicants have such knowledge.

Candidates will have three hours to complete the 120-question exam. The exam will be administered on a computer and contain 110 scored questions and 10 unscored pretest questions.

Exam questions may be:

- multiple-choice-single-response (MCSR): candidates are expected to choose the single best answer from the options provided
- multiple-choice-multiple-response (MCMR): candidates are expected to choose all correct answers
- drag and drop: candidates are expected to choose all correct answers
- matching: candidates are expected to match the options in the left column with their corresponding pair in the right column

This exam is closed book and candidates *may not* use personal reference materials during the exam. API will *not* provide reference materials during the test. The applicant will use information covered by the reference materials listed in the Publication Effectivity Sheet and Body of Knowledge for exam questions.

The pass point for this exam will be determined by an equating process. For more information regarding this process, please see the [Exam Scoring](#) section of the ICP website.

REFERENCE PUBLICATIONS:

- **API RP 1184**, *Pipeline Facility Construction Inspection*
- **API 1104**, *Welding of Pipelines and Related Facilities*
- **API RP 1110**, *Pressure Testing of Steel Pipelines for the Transportation of Gas, Petroleum Gas, Hazardous Liquids, Highly Volatile Liquids, or Carbon Dioxide*
- **API RP 540**, *Electrical Installations in Petroleum Processing Plants*
- **API RP 686**, *Recommended Practice for Machinery Installation and Installation Design*
- **ANSI Z49.1**, *Safety in Welding, Cutting, and Allied Processes*
- INGAA Construction Safety & Quality Consensus Guidelines
 - CS-G-3, *Safety Orientation Communication*
 - CS-R-10, *Pipe Hauling and Stringing Safety During Construction Activities*



- CS-S-12, *Trenching and Excavation Safety*

Note: Refer to the Publications Effectivity Sheet on the ICP website (www.api.org/ICP) for a list of specific editions, addenda, and supplements of the reference publications that are effective for your exam date.

EXAM CONTENT BASED ON SPECIFIC AREAS OF KNOWLEDGE AND PROFICIENCIES

The inspector should know about general inspection responsibilities, requirements, and expectations for pipeline facilities construction to carry out their duties effectively. API 1184 inspectors are not intended to be Subject Matter Experts in any one inspection responsibility,

The following lists general inspection test topics that an applicant should be familiar with and expect to be tested on during the API 1184 Pipeline Facility Construction Inspector exam:

Pipeline Facilities Construction Inspection/Management

The Inspector must be knowledgeable of the below concepts. The Inspector will be required to recognize the importance of safety, project procedures, specifications, and be able to identify deficiencies and rectify as appropriate. Identifying Operator Qualifications for appropriateness, validity, as well as trade-specific certifications are required.

- Quality assurance (records, measurement, documentation)
 - The inspector shall have a deep knowledge of bid drawings and applied specifications to review bid packages and make recommendations. The inspector shall have a basic understanding of all sub-trades to achieve craft quality. The inspector shall ensure all documents, such as weld maps, drawing as-builts, hydrotest reports, equipment certifications, mil sheets, are collected and stored in the job file.
- Safety (basic site safety, roles, responsibilities, etc.)
 - The inspector shall work with local safety personnel to ensure job site safety concerns and all contract workers are site-specific trained. The inspector provides all contract personnel with proper safety equipment as the task requires. The inspector must attend job site assessment (JSA) before commencing work. The inspector must ensure that all one calls, complete work, and hot work permit documents before execution.
- Environmental protection (permits, documentation, plans, etc.)
 - The inspector shall read and understand environmental limitations set by job site jurisdictional permits. The inspector shall ensure the installation of all erosion control, such as silt fence for stormwater runoff.
- Training and Qualifications
 - The inspector shall ensure all contractors' have proper certifications for operating equipment, provide equipment calibrations, and understand the application of operator qualifications.



Activities Prior to Construction

The inspector will be knowledgeable about the activities below and will work with affected trades to ensure the project gets off to a successful start. The inspector must have the ability to communicate with all project personnel effectively and monitor the job site schedule and coordinate trades, so they work cohesively together.

- Surveying
 - Site limits, property boundaries, elevation
 - Crossing locations and buried infrastructure (underground pipe, buried electrical, foundation, etc.)
- Site work
 - Clearing and grading
 - Excavation, trenching, and backfilling
 - Soil (removal, replacement, compaction, fill material, etc.)
 - Blasting plans
- Materials handling and receiving
 - Documentation (vendor data, mill/material certifications etc.)
 - Loading, transporting, unloading, storing/stockpiling
 - Defects, damages, and quarantine

Construction and Installation

The inspector ensures that the below activities are performed to project specifications and code requirements. Deficiencies identified during inspection must be escalated to appropriate personnel, and ensure execution of remediation, and is properly performed, and documented.

- Foundations and reinforced concrete
 - Installation (rebar, mix design, form placement, sampling/testing etc.)
 - Post-installation inspection (form removal, holidays/repairs, etc.)
- Structural steel
 - General Code requirements
 - Protection (padding, coating, etc.)
 - Equipment (cranes, trolleys, hoists, etc.)
 - Installation (mounting procedure, field modifications, etc.)
- Vendor/pre-packaged equipment
 - Lifting, lift plans, transportation, and storage



- Installation (support structures, securement, machinery checks, etc.)
- Equipment (protection, checks, damage, etc.)

- Piping
 - Welding (procedures, welder qualifications, acceptance criteria, etc.)
 - Assembling and installation
 - Pressure testing (before, during, after)

- Coating and painting
 - Coating selection
 - Material handling and storage
 - Holiday detection

- Instrumentation and electrical
 - Cables, conduits, cable trays
 - Grounding (ex. cathodic protection)
 - Tubing, instrumentation
 - Termination, boxes