

API 570 Piping Inspector Practice Test (Sample)

Study Guide



Everything you need from our exam experts!

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Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:

1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.

2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 - 45 minutes). Review a handful of questions, reflect on the explanations.

3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

6. Repeat and Review

Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!

Questions

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- 1. What is the suggested interval for above-grade visual surveillance of buried pipe?**
 - A. 6 months**
 - B. 1 year**
 - C. 3 months**
 - D. 2 years**

- 2. Prior to authorization for alteration work, the inspector must consult with which party?**
 - A. The owner.**
 - B. The piping engineer.**
 - C. The project manager.**
 - D. The inspector's supervisor.**

- 3. If PWHT is used to prevent environmental cracking, what does it imply about using preheat as a substitute?**
 - A. PWHT is required to prevent environmental cracking.**
 - B. Preheating is always safer.**
 - C. Environmental cracking cannot be prevented by PWHT.**
 - D. Preheating is always cheaper.**

- 4. When welding piping components with different thicknesses, what feature should be used on the thicker part to ensure proper fit-up?**
 - A. 30 degree taper**
 - B. 45 degree bevel**
 - C. 60 degree square cut**
 - D. 0 degree parallel edge**

- 5. The Charpy impact test primarily measures which property?**
 - A. Hardness**
 - B. Toughness**
 - C. Tensile strength**
 - D. Ductility at elevated temperature**

- 6. Guides added to control vibration must be checked to insure they do not what?**
- A. Increase flow**
 - B. Restrict thermal expansion**
 - C. Corrode**
 - D. Vary temperature unexpectedly**
- 7. The corrosiveness of soils can be determined by measuring which soil property?**
- A. Resistivity**
 - B. pH**
 - C. Conductivity**
 - D. Moisture content**
- 8. What indicates internal CO₂ corrosion?**
- A. Rough pitting across wall**
 - B. Uniform scaling**
 - C. Smooth grooving of pipe wall**
 - D. Delamination**
- 9. In facilities with very harsh service conditions, which pipe material is commonly specified for primary lines?**
- A. Seamless pipe**
 - B. Welded pipe**
 - C. ERW pipe**
 - D. Cast iron pipe**
- 10. Who approves welding procedures qualified by others?**
- A. Owner/User**
 - B. Welding Supervisor**
 - C. Quality Manager**
 - D. The Inspector**

Answers

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1. A
2. B
3. A
4. A
5. B
6. B
7. A
8. C
9. A
10. D

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Explanations

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1. What is the suggested interval for above-grade visual surveillance of buried pipe?

- A. 6 months**
- B. 1 year**
- C. 3 months**
- D. 2 years**

Regular above-grade visual surveillance of buried pipe targets the portions where the line is exposed at or near the ground surface to spot coating damage, corrosion, leaks, soil movement, or vegetation that can indicate moisture intrusion or contact with the environment. This inspection helps catch deterioration early before it progresses to leaks or failures. Six months is the recommended interval because semi-annual checks strike a practical balance between timely detection and inspection effort for buried lines that aren't constantly visible; more frequent surveillance can be unnecessary in normal conditions, while longer intervals risk missing early signs of trouble. In riskier environments or if issues are observed, the interval can be adjusted accordingly, but extending it to a year or two increases the chance that problems go unnoticed.

2. Prior to authorization for alteration work, the inspector must consult with which party?

- A. The owner.**
- B. The piping engineer.**
- C. The project manager.**
- D. The inspector's supervisor.**

The key idea is that changes to piping require an engineering review before they're allowed. Before authorizing alteration work, the inspector must seek input from the piping engineer because only the engineer is equipped to evaluate the technical implications of changes—ensuring the modification meets design criteria, material compatibility, pressure and temperature limits, welding and fabrication requirements, and overall system integrity under API 570 and relevant codes. This engineering sign-off ensures the alteration won't introduce new safety or reliability risks. The other roles are important for coordination and oversight, but they don't provide the engineering assessment needed for alterations: the owner authorizes funding or ownership decisions, the project manager handles scope and timeline, and the supervisor provides supervision, not the technical authorization.

3. If PWHT is used to prevent environmental cracking, what does it imply about using preheat as a substitute?

- A. PWHT is required to prevent environmental cracking.**
- B. Preheating is always safer.**
- C. Environmental cracking cannot be prevented by PWHT.**
- D. Preheating is always cheaper.**

Post-weld heat treatment provides essential stress relief and tempering of the weld and heat-affected zone, which helps resist environmental cracking in certain service conditions. If PWHT is specified to prevent environmental cracking, it means that this post-weld treatment is required and cannot be substituted by preheating alone. Preheating can aid weldability and may influence hydrogen diffusion during welding, but it does not deliver the post-weld tempering and residual-stress relief that PWHT provides. Therefore, using preheat as a substitute is not acceptable.

4. When welding piping components with different thicknesses, what feature should be used on the thicker part to ensure proper fit-up?

- A. 30 degree taper**
- B. 45 degree bevel**
- C. 60 degree square cut**
- D. 0 degree parallel edge**

When joining pipes of different wall thicknesses, shaping the thicker end with a taper lets the pieces come together with a consistent weld groove. A 30-degree taper on the thicker part provides a gradual transition from the thicker wall to the thinner wall, aligning the outer surfaces and creating the proper weld throat all around the joint. This setup allows adequate root penetration and filler metal to fill the joint evenly, while minimizing gaps and distortion that can occur if there's no taper. Using a flat, square-cut, or parallel edge would leave mismatches or insufficient space for the weld, making proper fit-up difficult. So, tapering the thicker part by about 30 degrees best ensures a proper and reliable weld joint.

5. The Charpy impact test primarily measures which property?

- A. Hardness**
- B. Toughness**
- C. Tensile strength**
- D. Ductility at elevated temperature**

The main concept tested is impact toughness—the material's ability to absorb energy before fracturing under a sudden, high-rate load. In the Charpy test, a notched specimen is struck by a pendulum, and the energy required to fracture it is measured. This absorbed energy reflects notch toughness: materials that absorb more energy tend to be tougher and exhibit more ductile behavior under impact, while those that crack with little energy are more brittle. This isn't a test of hardness (which comes from indentation tests) or tensile strength (which comes from a static pull to failure). Ductility at elevated temperature can be explored with Charpy at different temperatures, but the primary property it assesses is toughness.

6. Guides added to control vibration must be checked to insure they do not what?

- A. Increase flow**
- B. Restrict thermal expansion**
- C. Corrode**
- D. Vary temperature unexpectedly**

Guides added to control vibration must allow the pipe to expand and contract with temperature. If these guides restrain thermal expansion, the piping becomes locked in place as it heats, producing high axial stresses and potential fatigue failures at supports, joints, or bends. Over time, this constraint can lead to cracks, misalignment, or leaks. Therefore, during inspection you check that the guides provide freedom for axial movement, with proper clearances or sliding interfaces, and that they do not bind the pipe as it expands or contracts. The goal is to keep vibration under control without introducing restraint to thermal growth.

7. The corrosiveness of soils can be determined by measuring which soil property?

- A. Resistivity**
- B. pH**
- C. Conductivity**
- D. Moisture content**

Corrosion of buried metals is driven by how easily electrical current can move through the soil. That ability is captured by soil resistivity. Low resistivity soils conduct electricity well, which increases corrosion currents and speeds up deterioration, making resistivity the most direct measure of corrosivity. Conductivity relates to the same property but is the reciprocal of resistivity, and standard practice uses resistivity as the primary metric. While pH and moisture content can influence corrosion under certain conditions, they do not quantify the electrochemical driving force as directly as resistivity does.

8. What indicates internal CO₂ corrosion?

- A. Rough pitting across wall**
- B. Uniform scaling**
- C. Smooth grooving of pipe wall**
- D. Delamination**

Internal CO₂ corrosion tends to produce a uniform, steady loss of metal rather than breakouts of rough pits. When CO₂-saturated water forms carbonic acid, the attack occurs fairly evenly across the inner surface, often showing up as a smooth groove or thinning running along the pipe wall. This smooth grooving reflects consistent metal loss with a relatively uniform surface, rather than jagged pits or scalloped areas. Rough pitting across the wall would indicate localized attack from other causes (like impurities, H₂S, or microbiological factors). Uniform scaling suggests a protective mineral layer forming on the metal surface, which reduces or halts corrosion rather than indicating active internal corrosion. Delamination points to coating or insulation failures rather than the corrosion pattern inside the pipe. So, the presence of a smooth grooving of the pipe wall is the best indicator of internal CO₂ corrosion.

9. In facilities with very harsh service conditions, which pipe material is commonly specified for primary lines?

- A. Seamless pipe**
- B. Welded pipe**
- C. ERW pipe**
- D. Cast iron pipe**

In harsh service conditions, primary lines are built for maximum reliability, so seamless pipe is preferred. It is produced without a welded seam, eliminating the weld bead and heat-affected zone that can become initiation points for cracks or corrosion under high pressure, temperature, or aggressive fluids. This gives more uniform strength, better toughness, and higher resistance to failure, which is crucial for critical piping. Welded pipes, including ERW, have seams that can be vulnerable in demanding service, and cast iron is brittle and generally not suitable for high-pressure primary lines. For these reasons, seamless pipe is commonly specified for primary lines.

10. Who approves welding procedures qualified by others?

- A. Owner/User**
- B. Welding Supervisor**
- C. Quality Manager**
- D. The Inspector**

Verifying and approving a welding procedure that has already been qualified by others is about on-site compliance and acceptance. The inspector reviews the Welding Procedure Specification and the Welding Procedure Qualification Records to confirm the tests were properly performed, the procedure aligns with applicable codes and project requirements, and the welder qualifications match what the procedure calls for. With the records in order and the method shown to be capable, the inspector signs off to authorize the procedure for use. While the owner/user may authorize work, and the welding supervisor ensures execution and the QA/QC group oversees the system, the formal approval of a qualified welding procedure is the inspector's responsibility to ensure proper documentation and compliance before welding begins.

Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at hello@examzify.com.

Or visit your dedicated course page for more study tools and resources:

<https://api570.examzify.com>

We wish you the very best on your exam journey. You've got this!

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