

GMAW WELDING LEVEL 2 PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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THE FULL VERSION STUDY GUIDE

<https://gmawweldinglvl2.examzify.com>



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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. For stainless steel thicker than 1/4 inch using GMAW, a slight side-to-side movement should be used.**
 - A. True
 - B. False
 - C. Only with high currents
 - D. Only in the flat position
- 2. What is the effect of aluminum oxide on weld quality and how is it removed before welding?**
 - A. Aluminum oxide is non-conductive and inhibits fusion; remove by mechanical grinding or chemical cleaners
 - B. Aluminum oxide is conductive and improves fusion; removed by wiping with water
 - C. Aluminum oxide has no effect on welding quality
 - D. Aluminum oxide is corrosive and improves shielding; removal not required
- 3. What is the effect of shielding gas purity on arc stability in GMAW?**
 - A. Impure gas reduces arc stability.
 - B. Gas purity has no effect on arc stability.
 - C. Gas purity only affects color.
 - D. Gas purity increases amperage.
- 4. Which of the following is an acceptance criterion for a fillet weld in structural steel per typical codes?**
 - A. No cracks in the weld.
 - B. The weld must be perfectly flat with no finish requirement.
 - C. The weld size must exceed the specified throat by a large margin.
 - D. The base metal must be completely melted.
- 5. If the contact tip-to-work distance (CTWD) is not maintained properly, the weld is likely to have which issue?**
 - A. Porosity or poor fusion
 - B. Porosity due to moisture
 - C. Excess penetration
 - D. No issue

- 6. Which action helps mitigate arc blow related to grounding in GMAW?**
- A. Reposition the ground clamp, separate control cables, and use a stable ground
 - B. Increase travel speed drastically
 - C. Reduce gas flow to minimum
 - D. Use a larger electrode diameter
- 7. What is the main purpose of using a spool gun when welding aluminum?**
- A. To weld thicker steel at higher current
 - B. To increase bead width on aluminum without changing wire
 - C. For longer aluminum runs to prevent wire bending and feeding problems
 - D. To reduce the need for shielding gas
- 8. What information do welding symbols convey about a groove weld on a drawing, and how should a welder interpret size and length?**
- A. The color of the filler rod
 - B. The welding current setting
 - C. The orientation of the weld in space
 - D. Weld type, groove size, throat, length, and position
- 9. What is the purpose of a spool gun when welding aluminum with GMAW?**
- A. To increase the welding current capacity.
 - B. To simplify feeding softer aluminum wire and reduce friction and lead length issues, improving feeding consistency.
 - C. To eliminate the need for shielding gas.
 - D. To make the weld look shinier.
- 10. Root opening for carbon steel welded without edge preparation is 1/16 inch.**
- A. 1/8 inch
 - B. 1/16 inch
 - C. 3/16 inch
 - D. 1/32 inch

Answers

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

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Explanations

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1. For stainless steel thicker than 1/4 inch using GMAW, a slight side-to-side movement should be used.

A. True

B. False

C. Only with high currents

D. Only in the flat position

When welding stainless steel thicker than 1/4 inch with GMAW, you want to distribute heat along the joint and build up the weld across a wider area. A slight side-to-side weave helps accomplish that by enlarging the weld bead width and promoting fusion along both sides of the groove. This reduces the chances of burn-through in thick sections, helps fill the joint more effectively, and produces a more uniform weld with proper penetration. The weave is a technique to control heat input and bead shape, not something limited to a particular current level or to the flat position, so it's appropriate in various positions as needed for thicker stainless.

2. What is the effect of aluminum oxide on weld quality and how is it removed before welding?

A. Aluminum oxide is non-conductive and inhibits fusion; remove by mechanical grinding or chemical cleaners

B. Aluminum oxide is conductive and improves fusion; removed by wiping with water

C. Aluminum oxide has no effect on welding quality

D. Aluminum oxide is corrosive and improves shielding; removal not required

Aluminum oxide on the surface is non-conductive, so it blocks current and prevents proper fusion between the base metal and filler. If you weld over this oxide, you'll get lack of fusion, porosity, and weak welds. The fix is to remove the oxide before welding. You clean the surface by mechanical means—scrubbing or grinding with a stainless-steel brush or abrasive tool—to physically remove the oxide. Chemical cleaners or etchants can also be used to dissolve or loosen the layer, often followed by rinsing and drying to prevent re-oxidation. Simply wiping with water won't reliably remove the oxide and won't prepare the surface for true fusion. Removing the oxide is essential even when shielding gas is used.

3. What is the effect of shielding gas purity on arc stability in GMAW?

A. Impure gas reduces arc stability.

B. Gas purity has no effect on arc stability.

C. Gas purity only affects color.

D. Gas purity increases amperage.

Shielding gas purity directly affects arc stability in GMAW by maintaining a clean protective environment around the arc and the molten weld pool. When the gas is impure, contaminants such as oxygen, moisture, or other impurities can enter the arc and melt pool. This changes the arc characteristics, promotes oxidation, increases porosity, and causes erratic arc behavior or wandering, all of which make the weld less stable and less consistent. A pure shielding gas creates a stable, uniform atmosphere that protects the arc and metal from atmospheric contamination, leading to a steadier arc, better bead shape, and fewer defects. The other options misstate the effect: purity doesn't have no effect, and it certainly isn't primarily about color or about increasing amperage.

4. Which of the following is an acceptance criterion for a fillet weld in structural steel per typical codes?

A. No cracks in the weld.

- B. The weld must be perfectly flat with no finish requirement.
- C. The weld size must exceed the specified throat by a large margin.
- D. The base metal must be completely melted.

Cracks in the weld signal a fundamental defect that codes treat as unacceptable for structural integrity. The ability of a fillet weld to carry load depends on a sound fusion without cracks; even small cracks can propagate under service stresses and lead to failure, so the presence of cracks is a primary reject criterion. Other statements don't reflect universal acceptance rules: welds aren't required to be perfectly flat or have a finishless surface, since fillet welds commonly have some convexity and finishing requirements vary by project. The idea that the weld size must be kept well above the specified throat isn't a standard acceptance rule, as welds must meet prescribed throat dimensions rather than exceed them by a large margin. And complete melting of the base metal isn't a defining criterion for fillet welds; they are designed to achieve fusion at the joint without needing to melt all the base metal.

5. If the contact tip-to-work distance (CTWD) is not maintained properly, the weld is likely to have which issue?

A. Porosity or poor fusion

- B. Porosity due to moisture
- C. Excess penetration
- D. No issue

The main idea here is how the distance from the contact tip to the workpiece (CTWD) affects the shielding gas protection and arc stability in MIG welding. When CTWD isn't kept consistent, the shielding gas may not blanket the molten weld properly, allowing air and moisture to contaminate the pool. That contamination shows up as porosity in the solidified weld, and an unstable or poorly heated arc can also lead to incomplete bonding or poor fusion. So porosity or poor fusion is the most likely defect when CTWD isn't maintained.

6. Which action helps mitigate arc blow related to grounding in GMAW?

- A. Reposition the ground clamp, separate control cables, and use a stable ground
- B. Increase travel speed drastically**
- C. Reduce gas flow to minimum
- D. Use a larger electrode diameter

Arc blow happens when magnetic fields around the welding current and nearby conductors push the arc off its intended path. A good, stable grounding path near the weld minimizes those stray magnetic fields and keeps the arc centered. Repositioning the ground clamp so it's as close as possible to the weld, using clean, solid metal for the ground, and keeping control cables separate from the welding lead all reduce ground impedance. That combination lowers the magnetic disturbances in the arc region, which is the primary way arc blow is mitigated. Options that focus on travel speed, shielding gas, or electrode size don't address the grounding path. Drastically increasing travel speed changes heat input but doesn't eliminate the magnetic effects causing arc blow. Reducing gas flow can cause shielding problems and won't stop arc wandering. A larger electrode diameter alters current and arc characteristics but doesn't fix the grounding issue that causes arc blow in the first place. So, improving the grounding setup is the most reliable way to mitigate arc blow related to grounding in GMAW.

7. What is the main purpose of using a spool gun when welding aluminum?

- A. To weld thicker steel at higher current
- B. To increase bead width on aluminum without changing wire
- C. For longer aluminum runs to prevent wire bending and feeding problems**
- D. To reduce the need for shielding gas

The main idea is that a spool gun solves a feeding reliability problem when welding aluminum. Aluminum wire is soft and tends to bend or kink, especially as it runs through long gun leads from the power source. By mounting the wire on a spool directly at the gun, the feed path becomes shorter and more rigid, which reduces wire bending, tangling, and feeding jams. This makes it practical to run longer aluminum welds with consistent feeding. The other options don't address this feeding-distance issue: it isn't about welding thicker steel at higher current, it doesn't inherently increase bead width by changing the wire, and it doesn't change the shielding gas requirement.

8. What information do welding symbols convey about a groove weld on a drawing, and how should a welder interpret size and length?

- A. The color of the filler rod
- B. The welding current setting
- C. The orientation of the weld in space
- D. Weld type, groove size, throat, length, and position**

Welding symbols on a drawing tell you the exact geometry and placement of the weld you need to make. For a groove weld, the symbol communicates the weld type (the specific groove form), the groove size (the bevel or root opening that defines how the pieces are joined), the throat (the minimum thickness of weld material at the root), the length (how long each weld segment runs along the joint), and the position (where the weld is applied, such as flat, horizontal, vertical, or overhead). This combination of details lets a welder fabricate the joint to the designed fit and strength. Interpreting size and length is straightforward: the groove size tells you how wide or deep the groove should be, which determines how much weld metal must fill the root and how the pieces are prepared. The throat dimension indicates the weld's effective thickness at the root, which relates to the required weld reinforcement and strength. The length specifies how long the weld run should be along the joint, with multiple lengths possibly shown for different sections. The symbol also indicates the orientation or position of the weld, which affects how you lay it out and weld it. Other aspects like the color of the filler rod or the welding current setting aren't conveyed by welding symbols. The symbol primarily describes the weld form, its dimensions, and its position, not the process parameters or consumable color.

9. What is the purpose of a spool gun when welding aluminum with GMAW?

- A. To increase the welding current capacity.
- B. To simplify feeding softer aluminum wire and reduce friction and lead length issues, improving feeding consistency.**
- C. To eliminate the need for shielding gas.
- D. To make the weld look shinier.

The main idea is that aluminum wire is very soft and tends to feed poorly through long, flexible feeders. A spool gun puts the wire spool directly on the welding gun and uses its own drive system, which shortens the feed path and reduces friction and lead-length problems. This setup keeps tension more stable and makes feeding smoother and more consistent, especially with small-diameter aluminum wire. As a result, arc stability and weld quality improve. It doesn't change shielding gas needs, it doesn't increase welding current capacity, and it won't by itself make the weld look shinier.

10. Root opening for carbon steel welded without edge preparation is 1/16 inch.

- A. 1/8 inch
- B. 1/16 inch**
- C. 3/16 inch
- D. 1/32 inch

Root opening is the gap between the edges of the joint at the root of a butt weld. When welding carbon steel without edge preparation, a small, controlled gap helps the molten metal reach the root and form a proper fuse without requiring excessive heat. A 1/16 inch gap is a balanced choice: wide enough to allow fusion across the root so the weld penetrates properly, but not so wide that it demands much more heat input, which can cause distortion or burn-through. If the gap were larger, like 1/8 inch or 3/16 inch, you'd need more heat to fill the root and you'd risk distortion and uncontrolled bead geometry. If the gap were smaller, like 1/32 inch, there's a greater chance of incomplete fusion at the root. So, 1/16 inch is the practical, reliable choice for carbon steel with no edge prep.

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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://gmawweldinglvl2.examzify.com>

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

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