AWS CWI Exam Cheat Sheet

Exam structure, welding symbols, NDT limits, inspection checkpoints, and code-book strategy. Use it as recall, then practice on the web.

Start free web practice: https://www.voltexam.com/study/cwi

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What this sheet cannot do

- It can tell you what to recall. It cannot tell you whether you would pass.
- Reading a sheet feels like progress. A score is progress you can check, and it is usually lower than the feeling.
- Three real questions are on the last page of this sheet. Answer them before you file it away.

What problem this sheet solves

- It organizes what CWI candidates forget under time pressure: exam structure, symbol conventions, NDT limits, and where acceptance criteria live.
- It does not replace the AWS Body of Knowledge, your code book, or the AWS CWI Examination User Guide.
- Use it as a recall sheet, then practice question sets by topic.

Exam structure (AWS)

- Part A, Fundamentals: 150 questions, computer-based at Prometric.
- Part B, Practical: 46 questions on hands-on activities with AWS-provided equipment.
- Part C, Code Book: 50–65 open-book questions on the one approved code you bring (for example AWS D1.1, API 1104 or ASME IX).
- Passing: at least 72 percent on each part. A strong part cannot carry a weak one.
- 2026 exam fees: $1,255 for AWS members, $1,520 for non-members.
- Time limits and pass rates: not published by AWS on its CWI page.

Welding symbols (AWS A2.4)

- Weld symbol below the reference line: arrow side. Above the line: other side. ISO 2553 drawings differ, so confirm the standard first.
- A flag at the junction of the arrow and reference line means a field weld.
- For a fillet weld, the size goes to the left of the weld symbol; length and pitch go to the right.
- The tail carries the process, specification or other references, and may be omitted when not needed.

NDT methods and their limits

- VT: surface only. The only method that applies before, during and after welding.
- PT: discontinuities open to the surface, on non-porous materials. Cleanliness is critical.
- MT: surface and near-surface, ferromagnetic materials only. Not aluminum or austenitic stainless.
- UT: internal discontinuities and thickness, through a transducer.
- RT: internal volumetric discontinuities such as porosity and slag. Requires radiation safety controls.

Inspection checkpoints

- Before welding: base metal identification, joint preparation, root opening, alignment and fit-up, WPS availability.
- During welding: preheat and interpass temperature, WPS variables, cleaning between passes.
- After welding: weld size and profile, discontinuities, dimensional checks, and the records the code requires.

Acceptance criteria: look them up, don't guess

- Under AWS D1.1 visual inspection criteria, the weld shall have no cracks.
- Undercut, porosity and fillet-size underrun limits depend on static vs. cyclic loading, thickness and the code edition. Read them from your code's visual acceptance table.
- A measurement exactly at the limit is acceptable; only a value that exceeds the limit is rejectable.

Part C strategy

- Tab and index the code book you will bring so you can reach acceptance tables, prequalification rules and qualification limits in seconds.
- Confirm the code edition AWS lists for your exam date in the AWS CWI Examination User Guide.
- Practice lookups against the clock: on an open-book part, finding the clause quickly is the skill being tested.

Study sequence (each pass is a link)

- **First pass:** processes, terms, and metallurgy basics →
- **Second pass:** welding symbols until arrow side and other side are automatic →
- **Third pass:** NDT methods, limits, and discontinuities →
- **Final weeks:** acceptance criteria and code lookups, timed →

Keep practicing

- VoltExam's CWI web bank has 450+ practice questions with explanations, organized by the topics above. It is supplemental practice, not a copy of the AWS exam.

Three real Welding Processes questions (answers on the last page)

- 1. Which welding process uses a non-consumable tungsten electrode? (A) GMAW (B) FCAW (C) GTAW (D) SMAW

- 2. In the SMAW electrode classification E7018, what does the '1' indicate? (A) Type of coating (B) Tensile strength (C) Welding position (D) Chemical composition

- 3. Which shielding gas is most commonly used for GMAW of aluminum? (A) CO2 (B) Argon (C) 75% Argon / 25% CO2 (D) Oxygen

- More Welding Processes questions, scored as you go →

Answers

- 1. C — GTAW. Gas Tungsten Arc Welding (GTAW) uses a non-consumable tungsten electrode to produce the arc. Filler metal is added separately if needed.

- 2. C — Welding position. The digit '1' in E7018 indicates that the electrode is suitable for all welding positions (flat, horizontal, vertical, overhead).

- 3. B — Argon. Argon is the standard inert shielding gas for aluminum GMAW to prevent oxidation and ensure arc stability. CO2 is reactive and cannot be used with aluminum.

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Freshness note: Exam structure, passing score and fees from the AWS Certified Welding Inspector page (aws.org), checked 2026-10-16. AWS does not publish time limits or pass rates there, so this sheet does not state them.

This sheet is for exam preparation and quick recall. Always verify the exact code edition, state bulletin, test provider handbook, and current regulations before exam day.