



Job Description for QC Inspector

JOB SUMMARY

The Quality Control Inspector is responsible for ensuring that all structural steel and hydromechanical components meet strict company standards, client specifications, and industry codes (AWS, AISC). This role involves rigorous physical inspection of raw materials, in-process fabrication, and finished products. The QC Inspector acts as the final gatekeeper, ensuring structural integrity, dimensional accuracy, and coating compliance before any product leaves the facility.

Reports to: Shop Superintendent

KEY RESPONSIBILITIES

- **Dimensional Verification:** Perform detailed inspections of fabricated assemblies to ensure they match shop drawings and project tolerances.
- **Weld Inspection:** Conduct visual inspections (VT) of welds to ensure compliance with AWS D1.1/D1.5 standards; coordinate and oversee NDT (Non-Destructive Testing) such as MT, PT, or UT as required.
- **Material Validation:** Verify Material Test Reports (MTRs) and ensure all raw materials meet project heat number and grade requirements.
- **Coating & Finishing Inspection:** Inspect surface preparation (blasting) and monitor paint/coating application (WFT/DFT measurements) to ensure corrosion protection specifications are met.
- **Documentation & Reporting:** Generate Non-Conformance Reports (NCRs), maintain inspection logs, and compile final "turnover packages" for clients.
- **Compliance Oversight:** Ensure all shop activities adhere to the internal Quality Management System (QMS) and AISC certification requirements.

CORE REQUIREMENTS

1. Experience & Certifications

- 1.1. Minimum of 3–5 years of experience in quality control within a heavy structural steel or industrial manufacturing environment.
- 1.2. **AWS Certified Welding Inspector (CWI)** status is highly preferred; alternatively, the ability to obtain certification within 6 months.
- 1.3. NACE or SSPC Level 1 (or higher) certification for coating inspection is a significant plus.
- 1.4. Current or previous AWS D1.1 certification (Structural Steel) is required; AWS D1.5 (Bridge) certification is a significant plus.
- 1.5. Must be familiar with Steel, Stainless Steel and Aluminum at a minimum.

Technical Skills

- 2.1. Advanced ability to read and interpret complex shop drawings, blueprints, and weld symbols.
- 2.2. Expert proficiency with precision measuring tools, including micrometers, calipers, tape measures, weld gauges, and ultrasonic thickness gauges.
- 2.3. Functional knowledge of hydromechanical systems (gates, seals, and mechanical tolerances) and how they interface with structural steel.

Software & Documentation

- 3.1. Proficiency in Microsoft Office (Excel/Word) for generating professional inspection reports and tracking data.
- 3.2. Experience with document control software or digital QC tracking systems (e.g., Tekla PowerFab or Bluebeam).
- 3.3. Strong written communication skills for detailing technical discrepancies in Non-Conformance Reports.

Standards & Codes

- 4.1. In-depth understanding of **AWS D1.1 (Structural Steel)** and **AWS D1.5 (Bridge Welding)** codes.
- 4.2. Familiarity with **AISC 360** and **AISC 201** standards for steel building and bridge fabrication.

- 4.3. Knowledge of SSPC (The Society for Protective Coatings) standards for surface preparation and coating application.

Professional Attributes

- 5.1. Exceptional attention to detail; able to identify minor defects that could impact long-term structural performance.
- 5.2. Strong conflict-resolution skills; ability to remain firm on quality standards while working collaboratively with shop fabricators.
- 5.3. High level of integrity and the ability to work independently without direct supervision.

PHYSICAL DEMANDS & WORK ENVIRONMENT

- Must be able to navigate a heavy industrial shop environment, including walking on uneven surfaces and climbing ladders to inspect large assemblies.
- Ability to stand for long periods and work in various weather conditions (non-climate-controlled shop).
- Frequent use of hands/arms to manipulate gauges and tools; must have vision corrected to 20/20 to identify weld discontinuities.