READY TO INSPECT — FIELD CHECKLIST

Structural welding special inspection checklist

A weld tells its story once. The independent inspector confirms the procedure and the welder are qualified for the joint, watches the work while it can still be corrected, and records the completed weld and any testing before it is coated over.

Who runs it: A third-party or owner's-rep welding inspector, coordinating with the fabricator or erector's welding crew. When: Before welding starts (qualifications and fit-up), during welding for critical joints, and at completion before coatings or fireproofing.

Qualification and preparation

- [ ] Welding procedure specifications available for the joints being welded
  A qualified procedure exists and matches the material, position and process.
  1 photo required
- [ ] Welder qualification current for the position and process
  Continuity and qualification records cover the welder and the work in front of you.
  1 photo required
- [ ] Welding scope and observation level set from the statement
  Joints that need continuous observation and those checked periodically identified from the statement of special inspections and the drawings.
  No photo required
- [ ] Base metal and filler metal match the approved submittals
  Heat numbers on the steel and the filler metal on the machine trace to the mill test reports and consumable records on file.
  1 photo required
- [ ] Fit-up, joint preparation and pre-heat verified before welding
  Root openings, bevels and cleanliness as detailed; pre-heat confirmed where required.
  2 photos required

In-process inspection

- [ ] Consumables and settings match the qualified procedure
  Electrode type and storage, gas and parameters consistent with the procedure in use.
  1 photo required
- [ ] Interpass condition and technique observed on critical joints
  Interpass cleaning and temperature control witnessed on representative welds.
  2 photos required
- [ ] Root pass observed before the fill passes go in
  Root fused and sound on the first pass; on joints welded from both sides, back-gouged to sound metal where the procedure calls for it before the second side.
  1 photo required

Completed welds and testing

- [ ] Completed welds visually inspected against acceptance criteria
  Size, length and profile correct; no undercut, porosity, cracks or missed returns.
  3 photos required
- [ ] Backing and weld tabs left or removed as the drawings detail
  On groove welds with backing or tabs, backing fused continuously where it stays; tabs removed and ends ground smooth where the details require it.
  No photo required
- [ ] Nondestructive testing witnessed where required
  The specified method performed at the specified joints; results recorded with locations.
  2 photos required
- [ ] Repairs re-inspected and accepted before coating
  Any rejected weld reworked, re-tested and signed off; nothing coated before acceptance.
  2 photos required

Discrepancies and reporting

- [ ] Inspected welds marked with their accept or reject status
  Each inspected joint paint-marked accepted or rejected with the defect type and logged by gridline and member, so the repair and any repeat NDT trace to it.
  1 photo required

- [ ] Unrepaired welds and missing NDT reported to the EOR and AHJ
  Welds not repaired, or testing not performed, before coating or fireproofing listed by joint and method on the report to the engineer of record and the building official.
  No photo required