

AWS D1.1

American Welding Society

AWS D1.1 is the structural welding code for steel: it governs how welds are qualified, made and judged. It ties every weld back to a qualified procedure and a qualified welder, and it sets the visual acceptance criteria a weld has to meet. In the field the role is observation and documentation of what is visible; the qualified welding inspector runs the formal inspection and any nondestructive testing.

What it covers

- Welder and welding procedure qualification records
- Weld size, length and profile against the joint called for
- Visual acceptance criteria for the completed weld
- Weld defects: undercut, porosity, cracks, incomplete fusion, overlap
- Base-metal preparation, fit-up and joint cleanliness before welding

What a field inspection looks at

- Visual observation of the finished weld: profile, size and continuity photographed along the joint, with obvious undercut or porosity flagged.
- Welder and procedure paperwork confirmed on hand before welding is accepted, referred to the qualified inspector for the formal check.
- Nondestructive testing left to the qualified inspector; the field record notes where NDT was called for, not a pass it cannot give.
- Fit-up and cleanliness photographed before the arc strikes, since a bad root shows up as a rejected weld later.
- Deficient welds photographed as found and again after the qualified inspector signs off the repair.

Adoption varies by jurisdiction. Confirm the edition your authority having jurisdiction enforces before you run a walk against it.