

Structural steel inspection checklist

Steel is inspected on connections. Bolts and welds are the whole story, and both get covered by decking, fireproofing and finishes on a schedule that leaves almost no window for a second look.

Who runs it: Erector's quality lead with the GC; a special inspector for bolting and welding where required. When: At delivery, at anchorage, during erection, and at each connection before it is covered or coated.

Delivery and anchorage

- ☐ Members match the shop drawings and are undamaged
Piece marks legible, no bent flanges or damaged coatings from transit. 2 photos required
- ☐ Anchor bolt location, projection and thread condition verified
Survey the layout before erection; photograph a tape at the critical spacing. 3 photos required
- ☐ Base plates set, grouted and shimmed as detailed
Full grout bearing, no voids, leveling nuts backed off where required. 2 photos required

Erection

- ☐ Columns plumb and frame within erection tolerance
Survey readings recorded per column line, not eyeballed. 2 photos required
- ☐ Temporary bracing installed and left until permanently stable
Bracing photographed in place; removal only after the diaphragm is complete. 2 photos required
- ☐ Members at the correct elevation and orientation
Check beam elevations against the plan before decking goes down. 2 photos required

Bolting

- ☐ Bolt type, grade and length correct for each connection
Photograph the connection with the bolt heads and washers visible. 3 photos required
- ☐ Faying surfaces prepared for the connection type
Slip-critical surfaces free of paint, oil and mill scale where required. 2 photos required
- ☐ Pretensioning performed and verified by the specified method
Match-marked bolts or indicators photographed after tensioning. 3 photos required

Welding and coatings

- ☐ Welder qualification and procedure on file for the work performed
Qualification current for the position and process being used. 1 photo required
- ☐ Weld size, length and appearance inspected
Gauge readings on critical welds; no undercut, porosity or missed returns. 3 photos required
- ☐ Touch-up and coatings applied after connection signoff
Damaged coating repaired; nothing coated before the connection is accepted. 2 photos required