

Guidance Note 5.09

The prefabrication checklist

Scope

This Guidance Note suggests an outline agenda for a prefabrication meeting for the interested parties on a project or, alternatively, a checklist for a technical review.

Interested parties may include a representative from the client, the contractor, and the steelwork contractor. Other interested parties might include the designer, where the client or contractor has employed one to prepare a design and the independent inspection authority where appointed to oversee some or all of the fabrication activity.

The prefabrication meeting

At the commencement of a contract that involves the fabrication of bridge steelwork, the parties involved may need to meet at an early stage to discuss the clarity of the contract provisions with respect to all the relevant technical issues.

The arrangements for carrying out the work need to be explained and recorded; access for inspection needs to be agreed; procedures for dealing with queries that arise need to be established.

An agenda that was drawn up by Messrs Sandberg for such initial meetings has been used within the steel bridge sector. A copy of that agenda is presented below, with a few additional points to cover increasing use of quality assurance schemes.

Careful consideration will need to be given to contractual arrangements encompassing quality management systems and agreed forms of self certification. This will need to cover input, if required, by the Designer and/or the inspector at clearly defined review stages, where necessary.

Agenda

- 1.0 Meeting details
 - 1.1 Purpose of meeting
 - 1.2 Agenda
 - 1.3 Official minutes
- 2.0 Fabrication programme
- 3.0 Specifications for materials and workmanship
 - 3.1 Application code and British Standards
 - 3.2 Use of other specifications and certificates of conformity (where permitted)
- 4.0 Sub contracting
 - 4.1 Flame cutting
 - 4.2 Fabrication and welding
 - 4.3 Bending
 - 4.4 Machining
 - 4.5 Non Destructive testing
 - 4.6 Destructive testing
 - 4.7 Protective treatment
 - 4.8 Site erection, welding, non-destructive testing and protective treatment
- 5.0 Materials supply
 - 5.1 Material specifications/codes and steel grades
 - 5.2 Mills inspection
 - 5.3 Supply condition
 - 5.4 Supply by stockists
 - 5.5 Certificates of test
- 6.0 Materials at Contractor's Works
 - 6.1 Contractor's quality management system for receipt
 - 6.2 Contractor's traceability system
 - 6.3 Certificates of test for Independent inspector's review
 - 6.4 Lamination checks
- 7.0 Drawings
- 8.0 Preparation of materials
 - 8.1 Flame cutting
 - 8.2 Preparation of edges, ends and surfaces

- 8.3 Fitted stiffeners
- 8.4 Holes for bolts
- 9.0 Welding
 - 9.1 Welding procedure specifications
 - 9.2 Welding procedure qualification records
 - 9.3 Welder qualifications
 - 9.4 Welding preparations
 - 9.5 Temporary attachments
 - 9.6 Welding distortion
 - 9.7 Welding stud shear connectors
- 10.0 Bending
- 11.0 Straightening and flattening
- 12.0 Production test plates
 - 12.1 Location and numbers of production test plates
 - 12.2 Testing of production test plates
- 13.0 Non destructive testing of welding
 - 13.1 Methods of and areas requiring NDT for butt and fillet welds
 - 13.2 Acceptance levels for NDT
 - 13.3 NDT equipment calibration
 - 13.4 NDT operator qualifications
 - 13.5 NDT procedures
 - 13.6 NDT reports
- 14.0 Testing of stud shear connectors
 - 14.1 Ring testing
 - 14.2 Bend testing
- 15.0 Tolerances
 - 15.1 Tolerance requirements
 - 15.2 Temporary erection at contractor's works
 - 15.3 Fabricator's method for recording tolerance checks
 - 15.4 Independent inspector checks
- 16.0 Bolts, nuts and washers
 - 16.1 Preloaded fastener assemblies
 - 16.2 Methods of tightening and pre-load control for preloaded bolts
- 17.0 Handling and stacking
- 18.0 Protective treatment
 - 18.1 Protective treatment system
 - 18.2 Paint manufacturer and paint data sheets
 - 18.3 Paint storage
 - 18.4 Testing of paints
- 18.5 Contractor's quality management system for painting
- 18.6 Painting environmental conditions
- 18.7 Painting procedure trial
- 18.8 Blast cleaning reference sample panel
- 18.9 Metal spray reference sample panel
- 18.10 Damage to protective treatment
- 18.11 Contact surfaces of slip resistant bolted joints
- 18.12 Independent inspector's involvement in protective treatment
- 19.0 General points
 - 19.1 Facilities for Independent inspector.
 - 19.2 Contractor's quality management documents review by Independent inspector
 - 19.3 Contractor's quality plan
 - 19.4 Inspector's quality plan
 - 19.5 Inspector's unconfirmed reports
 - 19.6 Independent inspector's contact with Client/ Contractor/Designer
 - 19.7 Procedure(s) for dealing with imperfections, defects and other non-conformities
- 20.0 Requirements for submission of records; identify records required, responsibility for collation and arrangements for submission.
 - 20.1 Any special requirements or considerations