

**KANSAS DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION TO THE
STANDARD SPECIFICATIONS, EDITION 2015**

SECTION 705

STRUCTURAL STEEL FABRICATION

Page 700-22, subsection 705.1. Delete this subsection and replace with the following:

Shop fabricate the structural steel according to the Contract Documents. This specification applies to bridges on highways and public roads carrying vehicular traffic and covered by AASHTO/AWS D1.5-2010, "Bridge Welding Code". See **SECTION 744** for all other steel or aluminum shop fabrication.

Page 700-23, subsection 705.2b.(4), 2nd paragraph after bullets. Delete this paragraph and replace with the following:

All structural steel shall comply with the ASTM A 6 quality requirements until released for shipment. Repair welding shall comply with the requirements of AASHTO/AWS D1.5, "Bridge Welding Code".

Page 700-23, subsection 705.2b.(4). Insert the following new paragraph between the 3rd and 4th paragraphs after bullets:

When T3 steel (any grade) is being welded, perform weld metal Charpy V-Notch testing for Weld Procedure Specification (WPS) qualification at the T3 temperature. Reference T3 following the grade in the material specification section of the WPS for those welds intended for use on T3 base metals and tested accordingly.

Page 700-23, subsection 705.2b.(5), 2nd paragraph. Delete this paragraph and replace with the following:

Provide an enclosed office area for the exclusive use of the Engineer at the location of fabrication. The area must satisfy the requirements of a Field Office in **SECTION 803** with the following additions/modifications:

- Floor area = 120 square feet (minimum);
- Single workbench or table, 30 inches x 8 feet (minimum dimensions);
- Desk, 30 inches x 5 feet, with drawers;
- Swivel desk chair with arm rests;
- Waste paper basket;
- Storage/Filing Cabinet with lock and key; and
- Broadband internet connection for one computer.

Page 700-23, subsection 705.2b.(7), last sentence. Delete this sentence and replace with the following:

The proposed procedure must comply with the AASHTO/AWS D1.5, "Bridge Welding Code", AASHTO's "Standard Specifications for Highway Bridges" and AASHTO's "LRFD Bridge Construction Specifications".

Page 700-24, subsection 705.2d.(2), 3rd sentence. Delete this sentence and replace with the following:

Heat straightening must comply with the AASHTO/AWS D1.5, "Bridge Welding Code"; AASHTO's "Standard Specifications for Highway Bridges"; AASHTO's "LRFD Bridge Construction Specifications"; and the FHWA report, "Heat-Straightening Repairs of Damaged Steel Bridges".

Page 700-24, subsection 705.2d.(3). Delete this subsection and replace with the following:

(3) Welding and Gas Cutting. Perform welding and gas cutting of structural steel according to the applicable requirements of the AASHTO/AWS D1.5, "Bridge Welding Code".

Page 700-26, subsection 705.2d.(14), 2nd paragraph after bullets, 2nd sentence. Delete this sentence and replace with the following:

No shop welding on girders or beams will be permitted after the final assembly has been inspected and accepted by the Engineer.

Page 700-27, subsection 705.2d.(17). Delete this paragraph and replace with the following:

(17) Bolted Connections. Perform all shop bolting according to **SECTION 712**. The maximum deviation from detailed flatness for a connected plate (flange, web, splice, filler, etc.) shall not exceed $D/(144*T^{0.5})$ inches or 3/16 inch, whichever is greater. D equals the least clear dimension (in inches) of the panel from edge to edge, flange to flange, web to web, stiffener to stiffener, or any combination thereof and T equals the thickness (in inches) of the connected plate. After snug tightening all fasteners, no gaps between the connected layers can be present except at the edges of splice or connected plates away from bolt holes. This applies to all bolted connections (bearing or slip-critical) of all geometries.

Page 700-27, subsection 705.2d.(18). Insert the following new subsection:

(18) Direction of Rolling. Cut and fabricate steel plates for main members and splice plates for flanges and main tension members so that the primary direction of rolling is parallel to direction of main tensile stress.

Page 700-27, subsections 705.2d.(18), (19), and (20). Renumber these subsections to (19), (20), and (21), respectively.

Page 700-27, subsection 705.2e, reference to AWS SUBSECTION 1.13, last sentence. Delete this sentence and replace with the following:

All such tacks or temporary welds shall be made according to Paragraphs 3.3.7 and 3.3.8 and welders and/or tack welders shall be qualified according to AWS requirements.

Page 700-29, subsection 705.2e, reference to AWS SUBSECTION 6.7. Delete 6.7.1.1 and 6.7.1.2 and replace with the following:

6.7.1.1 Welds made using ESW-NG process shall be tested by both RT and UT.

6.7.1.2 Radiographic testing of welds shall be performed according to the following requirements:

(1) 100% of all welded girder and rolled beam flange butt joints.

(2) All except the middle 1/3 of all welded girder or rolled beam web butt joints.

6.7.1.3 Ultrasonic testing of welds shall be performed according to the following requirements:

(1) 100% of each joint subject to calculated tension or stress reversal.

(2) 25% of each joint subject to compression or shear. If unacceptable discontinuities are found in spot testing, the entire length shall be tested.