

4600102 STRUCTURAL STEEL AND MISCELLANEOUS MATEALS
COMMENTS FROM INTERNAL/INDUSTRY REVIEW

Timothy McCullough
Timothy.McCullough@dot.state.fl.us
(352) 955-6681

Comments: (8/11/22, Industry)

Rick in Design is updating Series 700 drawings to remove some weld inspection language. He is trying to move everything material wise out of the design. In that process, we identified that the removed note would best utilized in the current 460 specification since it has to do with weld inspection. Revision shown below in red.

1. Recommend adding the additional inspection language needed for sign structures. To avoid this spreading into extra work for our Pedestrian bridges, we recommend breaking them apart. A lot of it is repeated, but it keeps where we have issues separated from where we do not have issues. This language shown below was passed around last year. The main change from the existed paragraph is the second to last sentence.

460-6.4.2 Tubular Bridge ~~or Overhead Sign Structures~~: Comply with the requirements of the AWS D1.1 Structural Welding Code as amended by the following:

Unless otherwise shown in the Plans, perform ultrasonic testing (UT) or radiographic testing (RT) on full penetration groove welds at the following frequency (use the AWS D1.1 Tubular Connections Class R Criteria for UT and Cyclically Loaded Criteria for RT.

One hundred percent of each joint subject to tension or reversal of stress.

Twenty-five percent of each joint subject to only compression or shear. If discontinuities are found in the joint, the remainder of the joint shall be tested.

Perform Magnetic Particle Testing at the following frequencies:

A minimum of 25% of all fillet or partial penetration groove welds in main members (Use the AWS D1.1 Tubular Connections Criteria). If **unacceptable** discontinuities are found, the remainder of the welds on the members shall be tested.

460-6.4.3 Overhead Sign Structures and Toll Gantries: Comply with the requirements of the AWS D1.1 Structural Welding Code as amended by the following:

Unless Unless otherwise shown in the Plans, perform 100 percent ultrasonic testing (UT) or radiographic testing (RT) on all full penetration groove welds.

Prior to galvanizing, perform Magnetic Particle Testing (MT) at the following frequencies:

One hundred percent of all fillet or partial penetration groove welds in the upright columns. A minimum of 25% of all other fillet or partial penetration groove welds in main members other than upright columns. If unacceptable discontinuities are found, the remainder of the welds on the member shall be tested.

After members are galvanized, perform one hundred percent MT of all fillet welds in the upright columns.

For acceptance, use AWS D1.1 Tubular Connection Criteria for MT, Tubular Connection Class R Criteria for UT, and Cyclically Loaded Criteria for RT.

Response: Language was included in the proposed specification.
