
Standard Method of Test for

**Helical Continuously Welded
Seam Corrugated Steel Pipe**

AASHTO Designation: T 241-95 (2021)

Technically Revised: 1995

Reviewed but Not Updated: 2021

Editorially Revised: 2021

Technical Subcommittee: 4b, Flexible and Metallic Pipe



**American Association of State Highway and Transportation Officials
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1. SCOPE

- 1.1. This method describes the procedure to be used in determining the quality of the seam or helical, continuously welded seam, corrugated steel pipe. The procedure to be used involves distorting a short length of welded seam by using a 25-mm diameter, hemispherical punch and a 38-mm inside diameter contoured die. The resulting distorted weld area will hereafter be called the “cup.”
- 1.2. At the option of the engineer, or in the event of a disagreement between the engineer and fabricator, the referee test described in Section 4 will be performed.
- 1.3. *The quality of the results produced by this standard are dependent on the competence of the personnel performing the procedure and the capability, calibration, and maintenance of the equipment used. Agencies that meet the criteria of R 18 are generally considered capable of competent and objective testing/sampling/inspection/etc. Users of this standard are cautioned that compliance with R 18 alone does not completely assure reliable results. Reliable results depend on many factors; following the suggestions of R 18 or some similar acceptable guideline provides a means of evaluating and controlling some of those factors.*
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2. REFERENCED DOCUMENTS

- 2.1. AASHTO Standards:
- R 18, Establishing and Implementing a Quality Management System for Construction Materials Testing Laboratories
 - T 244, Mechanical Testing of Steel Products.
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3. APPARATUS

- 3.1. *Die*—A die having an inside diameter of 38 mm and machined to conform to the corrugation of the sample (see Figure 1).
- 3.2. *Punch*—A punch consisting of a 25-mm steel ball attached to a section of 19-mm diameter steel rod (see Figure 1).
- 3.3. *Bending Test Device*—Bending jig with roller bending edges, adjustable supports, and 13-mm diameter mandrel (see Figure 2).
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- 3.4. *Gauge*—Figure 3 shows a gauge recommended for use in measuring various dimensions in connection with the cup test, and also for checking acceptable width of the area burned by welding. It is used in the following manner:
- 3.4.1. The projections at the top of the gauge are dimensioned horizontally in accordance with the widths of burned area (three times thickness of metal) acceptable under the specification for each indicated gauge of metal.
- 3.4.2. The 76.2-mm overall length dimension is used to check the positioning of the test.
- 3.4.3. When the gauge is positioned on the pipe so that the bottom legs straddle the convex side of the cup, the 10.31-mm projection should always touch the cup. The interval corresponds to the minimum allowable depth of the cup after relaxation.
- 3.4.4. The 6.35-mm side projection can be used to check conformance to the limits set forth in Section 3.3.