

AWS A4.5M/A4.5:2012
(ISO 15792-3:2011 MOD)
An American National Standard



**Standard Methods
for Classification
Testing of Positional
Capacity and
Root Penetration
of Welding
Consumables
in a Fillet Weld**



American Welding Society®



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**Approved by the
American National Standards Institute
March 9, 2012**

**Standard Methods for Classification Testing
of Positional Capacity and Root Penetration
of Welding Consumables in a Fillet Weld**

1st Edition

Prepared by the
American Welding Society (AWS) A5 Committee on Filler Metals and Allied Materials

Under the Direction of the
AWS Technical Activities Committee

Approved by the
AWS Board of Directors

Abstract

This standard describes preparation and assessment of a fillet weld test piece.

Test conditions prescribed and results required should not be considered to be requirements or expectations for a procedure qualification.

This specification makes use of both U.S. Customary Units and the International System of Units (SI). Since these are not equivalent, each system must be used independently of the other.



American Welding Society®

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Foreword

This foreword is not part of AWS A4.5M/A4.5:2012 (ISO 15792-3:2011 MOD), *Standard Methods for Classification Testing of Positional Capacity and Root Penetration of Welding Consumables in a Fillet Weld*, but is included for informational purposes only.

This document is the first adoption of ISO 15792-3:2011 with additional informative annexes.

Please note that ISO uses commas (,) and AWS uses periods (.) for decimals. The ISO decimal commas have been replaced by periods in this document for consistency.

Attention is drawn to the possibility that some of the elements of this part of ISO 15792 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

Comments and suggestions for the improvement of this standard are welcome. They should be sent to the Secretary, AWS A5 Committee on Filler Metals and Allied Materials, American Welding Society, 550 N.W. LeJeune Road, Miami, FL 33126.

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Standard methods for classification testing of positional capacity and root penetration of welding consumables in a fillet weld

1 Scope

This standard specifies the preparation and assessment of fillet weld test pieces for conformity assessment of positional usability and root penetration requirements for consumables classification standards for welding non-alloy and fine grain steels, low alloy steels, stainless steels, and nickel base alloys.

This standard does not specify acceptance requirements.

Safety and Health issues and concerns are beyond the scope of this standard and are, therefore, not fully addressed herein. Safety and health information is available from other sources, including, but not limited to, ANSI Z49.1, Safety in Welding, Cutting, and Allied Processes, and applicable federal and state regulations.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

AWS¹ A3.0, *Standard Welding Terms and Definitions*

3 General requirements

Samples of welding consumables (electrodes or wires) to be tested shall be representative of the manufacturer's products being classified. Test pieces shall be prepared and tested as specified in Clauses 5 and 6, as well as in the consumable classification standard. The test results shall fulfil the requirements of the classification standard.

4 Test plate material

The plate material shall be selected from the range of materials and material thicknesses prescribed by the consumable classification standard. The surfaces to be welded shall be free of scale, rust, and other contaminants.

¹ AWS standards are published by the American Welding Society, 550 N.W. LeJeune Road, Miami, FL 33126.