


AWS A2.4:2007
An American National Standard



Standard Symbols for Welding, Brazing, and Nondestructive Examination



American Welding Society



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Standard Symbols for Welding, Brazing, and Nondestructive Examination

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Under the Direction of the
AWS Technical Activities Committee

Approved by the
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Abstract

This standard establishes a method for specifying certain welding, brazing, and nondestructive examination information by means of symbols. Detailed information and examples are provided for the construction and interpretation of these symbols. This system provides a means of specifying welding or brazing operations as well as nondestructive examination, including the examination method, frequency, and extent.



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Standard Symbols for Welding, Brazing, and Nondestructive Examination

1. Scope

This standard presents a system for indicating welding, brazing, and nondestructive examination requirements. The system includes provisions for the graphical representation of welds, brazes, and nondestructive examination methods with conventions for specifying, at a minimum, the location and extent of their application. Optional elements and supplementary symbols provide a means for specifying additional requirements.

The figures included with the text are intended to show how the correct format and applications of symbols may be used to convey welding, brazing, and nondestructive examination information. They are not intended to represent recommended welding, brazing, nondestructive examination, or design practice.

The section addressing brazing uses the same symbols that are used for welding. The section on nondestructive examination symbols establishes the symbols to be used on drawings to specify nondestructive examination for determining the suitability of components. The nondestructive examination symbols included in this standard represent nondestructive examination methods as discussed in the latest edition of the AWS publication AWS B1.10, *Guide for the Nondestructive Examination of Welds*. Definitions and the details for the use of the various nondestructive examination methods are found in AWS B1.10.

For illustrative purposes, this standard makes use of both U.S. Customary and the International System of Units (SI). Examples featuring each system appear throughout the document.

Safety and health issues and concerns are beyond the scope of this standard, and therefore are 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.

The limitations included in specifications and codes are also beyond the scope of this standard.

2. Normative References

The following standards contain provisions which, through reference in this text, constitute provisions of this AWS standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this AWS standard are encouraged to investigate the possibility of applying the most recent editions of the documents shown below. For undated references, the latest edition of the standard referred to applies.

The following American Welding Society¹ standards are used in the mandatory sections of this document:

(1) AWS A3.0:2001, *Standard Welding Terms and Definitions*;

(2) AWS A5.30/A5.30M, *Specification for Consumable Inserts*; and

(3) AWS B1.10, *Guide for the Nondestructive Examination of Welds*.

3. Basic Welding Symbols

3.1 Distinction between Weld Symbol and Welding Symbol. This standard makes a distinction between the terms *weld symbol* and *welding symbol*. The weld symbol indicates the type of weld and, when used, is a part of the welding symbol.

3.2 Basis of Reference. In the present system, the joint is the basis of reference. The *arrow side* is the side of the joint to which the arrow of the symbol points. The *other side* is the side of the joint opposite the arrow side.

3.3 Weld Symbols. Weld symbols shall be as shown in Figure 1. The symbols shall be drawn in contact with the reference line.

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