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An American National Standard



Specification for the Qualification of Robotic Arc Welding Personnel



American Welding Society



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Specification for the Qualification of Robotic Arc Welding Personnel

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Prepared by
AWS D16 Committee on Robotic and Automatic Welding

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AWS Technical Activities Committee

Approved by
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Abstract

This specification provides requirements for the qualification of robotic arc welding support personnel at three different levels—CRAW-L1, CRAW-O, and CRAW-T. The revisions in this edition align education and experience requirements more realistically with those in industry.



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Specification for the Qualification of Robotic Arc Welding Personnel

1. Scope

This standard provides specifications for the qualification of robotic arc welding personnel. This standard does not prevent a manufacturer, fabricator, or contractor from continuing to qualify robotic welding personnel according to other standards.

Qualification is limited to those performance variables provided in Tables 1 through 4 in this standard. There are three different levels in which qualification can be achieved. The work of operators, technicians, and maintenance support personnel is included in these three levels (see Tables 1, 2, and 3).

This standard makes use of both the International System of Units (SI) and U.S. Customary Units. The latter are shown within brackets [] or in appropriate columns in tables and figures. The measurements may not be exact equivalents; therefore, each system shall be used independently.

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*¹ and applicable federal and state regulations.

2. Normative References¹

The following AWS standards contain provisions which, through reference in this text, constitute provisions of this AWS standard. For undated references, the latest edition of the referenced standard shall apply. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply.

1. For Informative (nonmandatory) References, see Annex B.

(1) AWS A3.0, *Standard Welding Terms and Definitions*²

(2) AWS QC19, *Standard for the AWS Certification of Robotic Arc Welding Personnel*³

3. Definitions

Standard welding terms are defined in the current edition of AWS A3.0, *Standard Welding Terms and Definitions*. Terms unique to this standard are defined herein.

inspection. Examination or measurement to verify whether an item or activity conforms to specified requirements.

inspector. A person who performs an inspection or examination function to verify conformance to specific requirements.

qualification. Verification by testing of the characteristics or abilities gained through training, experience, or both that enables individuals to perform certain functions.

robotic arc welding personnel. Individuals who may be operators, technicians, or maintenance support personnel for robotic arc welding applications.

robotic arc welding personnel qualification. The verification of robotic arc welding personnel's ability to meet prescribed standards for performance qualification.

verification. The act of reviewing, inspecting, testing, checking, auditing, or otherwise determining and documenting whether items, processes, services, or documents conform to specified requirements.

2. For ordering AWS standards, contact Global Engineering Documents, 15 Inverness Way East, Englewood, CO 80112-5776. Telephones: (800) 854-7179, (303) 397-2740; fax (303) 397-2740; Internet: www.global.ihs.com.

3. A free copy may be obtained from AWS at <http://www.aws.org/certification/>.