
Specification for Qualification and Certification of SENSE Level I— Entry Welders

AWS QC10:2017

Specification for Qualification and Certification of SENSE Level I—Entry Welders

Supersedes AWS QC10:2008

Prepared by the
American Welding Society (AWS) Education Committee—Task Group on SENSE Standards

Under the Direction of the
AWS Education Committee

Approved by the
AWS Board of Directors

Abstract

AWS QC10, *Specification for Qualification and Certification of SENSE Level I—Entry Welders*, is the specification that defines the requirements for trainees to receive an AWS SENSE training certificate for full or partial completion of the Level I—Entry Welder program. It also specifies the requirements for SENSE training organizations in order to submit trainees for a full or partial AWS training certificate and inclusion in the AWS SENSE Certificate Database. AWS QC10 is the governing specification for AWS EG2.0, *Guide for the Training of Welding Personnel: SENSE Level I—Entry Welders*.



ISBN: 978-0-87171-932-4
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Foreword

This foreword is not part of this standard but is included for informational purposes only.

The AWS Schools Excelling through National Skill Standards Education (SENSE) program began in 1993 with the award of a grant by the U.S. Department of Education to develop a series of voluntary standards to promote consistency and quality in welding education on a national basis. The development of these National Skill Standards involved a survey of the welding industry, skilled trades, and the welding education community, to arrive at a consensus on welder skills and competencies required by industry. The result of this survey was an occupational task analysis. This task analysis formed the basis for the development of the SENSE specifications and guidelines.

Currently, there are two levels of SENSE: Level I—Entry Welder and Level II—Advanced Welder. Both levels are designed to facilitate the implementation of a modular welder training program based on best practices.

The specifications and guidelines for SENSE Level I were revised in 2015, and SENSE Level II—Advanced Welder was modularized to facilitate implementation in a variety of welder training programs. Supplements were also developed to provide technique sheets and AWS standard welding procedure specifications (SWPSs) for SENSE workmanship and performance qualification tests. The supplements are based on AWS B2.0, *Standard Welding Procedure Specifications (SWPSs)*. In addition, AWS QC21, *Specification for AWS Accreditation of SENSE Welder Training Programs*, was added. The specifications, guidelines, and supplements for SENSE welder training and welder training program accreditation are:

AWS QC10, *Specification for Qualification and Certification of SENSE Level I—Entry Welders*
 AWS EG2.0, *Guide for the Training of Welding Personnel: SENSE Level I—Entry Welders*
 AWS EG2.0 Supplement, *Supplement SENSE Level I—Entry Welder Training Performance Testing Procedures*

AWS QC11, *Specification for Qualification and Certification of SENSE Level II—Advanced Welders*
 AWS EG3.0, *Guide for the Training of Welding Personnel: SENSE Level II—Advanced Welders*
 AWS EG3.0 Supplement, *Supplement SENSE Level II—Advanced Welder Training Performance Testing Procedures*

AWS QC21, *Specification for AWS Accreditation of SENSE Welder Training Programs*
 AWS EG21, *Specification for the Qualification of SENSE Welder Training Programs*

This latest revision of AWS QC10, *Specification for Qualification and Certification of Level I—Entry Welders*, represents the AWS Education Committee’s consensus on the requirements for trainees of SENSE training organizations to receive an AWS SENSE training certificate for full or partial completion of the Level I—Entry Welder program, and to be registered in the AWS SENSE Certificate Database.

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Specification for Qualification and Certification of SENSE Level I—Entry Welders

1. Scope

1.1 This specification establishes the minimum requirements for trainees to receive AWS SENSE training certificate for full or partial completion of the Level I—Entry Welder program. SENSE training organizations are free to exceed these minimum requirements.

1.2 This specification defines practical knowledge examinations, as well as the workmanship and performance qualification tests that require a minimum level of reading, computational and manipulative skills to successfully complete.

1.3 All individuals that meet the specified training certificate criteria will be listed in the AWS SENSE Certificate Database provided that:

(1) the training facility is a SENSE Accredited Training Program (ATP) per the requirements of AWS QC21, *Specification for AWS Accreditation of SENSE Welder Training Programs*

(2) the required proof(s) of completion are submitted to AWS along with applicable fees.

1.4 Organizations that are not a SENSE Accredited Training Program may use this specification, but individuals they instruct will not be eligible for SENSE training certificates, nor will they be listed in the AWS SENSE Certificate Database.

1.5 Although some questions on knowledge examinations may pertain to safety, this specification is not intended to address safety and health. Safety and health requirements are provided in ANSI Z49.1, *Safety in Welding, Cutting, and Allied Processes*, as well as federal, state, and local government regulations. The responsibility for safety rests primarily with the trainee and the training organization during training.

2. Reference Documents

Unless specified, the latest approved revision applies.

ANSI Z49.1, *Safety in Welding, Cutting, and Allied Processes*

AWS A3.0M/A3.0, *Standard Welding Terms and Definitions, Including Terms for Adhesive Bonding, Brazing, Soldering, Thermal Cutting, and Thermal Spraying*

AWS B2, *Standard Welding Procedure Specifications (SWPSs)*

AWS B2.1/B2.1M, *Specification for Welding Procedures and Performance Qualification*

AWS B4.0, *Standard Methods for Mechanical Testing of Welds*

AWS B5.5, *Specification for the Qualification of Welder Educators*

AWS C4.1, *Criteria for Describing Oxygen-Cut Surfaces, and Oxygen Cutting Surface Roughness Gauge*

AWS EG2.0, *Guide for the Training of Welding Personnel Level I—Entry Welder*

AWS EG2.0 Supplement, *Supplement SENSE Level I—Welder Training Performance Testing Procedures*

AWS EG21, *Specification for the Qualification of SENSE Welder Training Programs*

AWS QC5, *Standard for AWS Certification of Welding Educators*

AWS QC21, *Specification for the AWS Accreditation of SENSE Welder Training Programs*