



## What is SENSE?

SENSE – Schools Excelling through National Skill Standards Education - is a set of specifications and guidelines designed to assist schools in training welders. The program guidelines were originally published in 1995 and 1996 through grants awarded by the U.S. Department of Education and Department of Labor. Based on a survey of the welding industry, the SENSE guidelines define two levels of knowledge and skills required in the welding workplace. Individuals trained in Training Organizations aligned to the SENSE guidelines may implement SENSE Level I: Entry Welder and/or SENSE Level II: Advanced Welder.

The SENSE specifications and guidelines help organizations build a welding education program that meets the requirements deemed essential by industry. Training organizations can choose process modules which correspond to local industry, while still leaving the trainee able to transfer mandatory module completion to other SENSE training organizations.

The SENSE specifications and guidelines were created and continue to be maintained by a committee of expert volunteers from all corners of the welding industry. These industry representatives work hard to ensure that a trainee completing a program built on the SENSE specifications and guidelines will have the skills to be both hireable and productive within the welding industry.

SENSE provides organizations with theory-based assessments, practical exams, and standardized welding procedures designed for the program. SENSE theory exams are administered through a Learning Management System located on SENSE Online ([www.senseonline.org](http://www.senseonline.org)). Practical exam grades are manually entered in the system as well. Once a trainee passes the required exams for a given process, they will earn a SENSE certificate for that process and a wallet card.

SENSE is not a curriculum, however, AWS has designed a curriculum that is aligned to SENSE Level I's standard guidelines. This curriculum is sold separately and can be found in the AWS Bookstore or by contacting [sales@aws.org](mailto:sales@aws.org).



## Program Benefits

- ✓ Industry-recognized standardized guidelines for your welder training program
- ✓ SENSE-designed standard welding procedures
- ✓ Complimentary one-year AWS Educational Institution Membership (EIM)
- ✓ Choice of eight (8) free reference books for your welding library
- ✓ Final written examinations provided for each module
- ✓ Access to SENSE Online (LMS)
- ✓ Industry-recognized credentials for students
- ✓ Welder credential verification system

## SENSE Level I – Entry Welder

An individual employed in this position is considered to possess a prerequisite amount of knowledge, attitude, skills, and habits required to perform routine, predictable, repetitive, and procedural tasks involving motor skills, and limited theoretical knowledge while working under close supervision. This level covers the four welding processes of SMAW, GMAW, FCAW, and GTAW.

## SENSE Level II – Advanced Welder

An individual employed in this position is considered to possess a prerequisite amount of knowledge, attitude, skills, and habits required to perform proceduralized tasks under general supervision, and complex tasks involving the use of theoretical knowledge and motor skills under close supervision. This level covers the four welding processes of SMAW, GMAW, FCAW, and GTAW on both plate and pipe, as well as plate and pipe for Welding Fabrication

## SENSE Standards

### SENSE Level I

*QC10: Specification for Qualification and Certification Level I – Entry Welder*

*EG2.0: Guide for the Training of Welding Personnel: Level I – Entry Welder*

*EG2.0 Supplement: SENSE Level I – Entry Welder Performance Testing Procedures*

### SENSE Level II

*QC11: Specification for Qualification and Certification Level II – Advanced Welder*

*EG3.0: Guide for the Training of Welding Personnel: Level II – Advanced Welder*

*EG23.0 Supplement: SENSE Level II – Advanced Welder Performance Testing Procedures*

QC standards are downloadable for free in the AWS Bookstore or upon request by submitting an email to [sense@aws.org](mailto:sense@aws.org).



## Registration Instructions

The process of registering for SENSE is simple. After reading the QC standard(s) and ensuring your organization understands the requirements, please have the designated program representative complete this SENSE registration packet and send payment to AWS.

Registration as a SENSE Training Organization is composed of four parts:

- 1) The SENSE Registration Form
- 2) The Letter of Commitment
- 3) SENSE Customized Library Form
- 4) EIM Application

Please ensure that all four parts of the SENSE registration packet are completed prior to submission to AWS. Once the organization is registered, the SENSE contacts indicated on the registration form will receive a confirmation email with their login credentials to SENSE Online, as well as further instructions on how to submit the enrollment form to enroll students into the online system. The EIM will be processed by our Membership team.

## Registration and Administrative Fees

The SENSE Program requires a one-time registration fee to be accompanied with the registration form. The SENSE registration fee varies depending on the level of implementation. There is no registration renewal fee. The student administrative fee for each level is paid through the school. Each SENSE participating location and campus must be registered and paid for separately.

Fees include:

Registration:

- Level I - \$500
- Levels I and II - \$600

Registration fee covers:

- SENSE Registration Certificate
- SENSE standards and exams
- Eight one-time complimentary AWS reference books/standards
- Your organization's personnel use of the AWS SENSE Online System

Student administrative:

- \$20 per student, per level

Administrative fee covers:

- Student access to SENSE Online exams
- Certificates of completion and wallet card, via SENSE Online, once students are eligible



## Training Organization Welding Personnel

We recommend that the training organization assign personnel involved in its welding program under the following roles:

### Program Representative

An individual employed by a SENSE Training Organization who is responsible for ensuring that the organization complies with all requirements and responsibilities located in the SENSE guidelines and specifications.

### Testing Supervisor

An individual employed by a SENSE Training Organization who is not engaged in the active training of trainees and who is responsible for administering all knowledge-based SENSE assessments.

### Welding Instructor

An individual employed by a SENSE Training Organization who is responsible for trainee instruction and administering and inspecting all workmanship-based SENSE assessments.

For additional information on SENSE, please visit our website at [www.senseonline.org](http://www.senseonline.org) , email an inquiry to [sense@aws.org](mailto:sense@aws.org), or contact the SENSE Program Manager at 1-800-443-9353, ext. 225.



### Registration Form

Please complete to become a SENSE Training Organization.

Name of Training Organization

Physical Street Address

City

State

Zip code

Country

Phone number

Organization's website

Program Representative: \_\_\_\_\_ e-mail: \_\_\_\_\_

Testing Supervisor: \_\_\_\_\_ e-mail: \_\_\_\_\_

Welding Instructor: \_\_\_\_\_ e-mail: \_\_\_\_\_

Please list below additional SENSE instructors/faculty who need access to SENSE materials, resources, and SENSE Online.

First and last name	Email



**Letter of Commitment**

**To:** AWS SENSE Program Manager

**Subject:** *Commitment of This Organization to act as a SENSE Training Organization using or guided by AWS QC10/EG2.0 and/or QC11/EG3.0 Specifications and Guidelines*

The Policy of the Training Organization is to abide by all the requirements of the applicable Standards while The Organization is operating as a SENSE Training Organization.

To implement the policy, I, \_\_\_\_\_, am designated as the Program Representative and agree to work with the American Welding Society to formulate a Quality Assurance Manual, and to abide by its provisions. Should any conflict develop that cannot be resolved by the Welding Instructor and the conflicting parties, the Welding Instructor is directed to refer the problem to me for resolution. I will decide the issue in accordance with the policy.

All SENSE Test Supervisors and SENSE Welding Instructors will report to me.

Signed for this SENSE Training Organization by

\_\_\_\_\_  
**Program Representative**

\_\_\_\_\_  
Date



## SENSE Customized Library Form

Ship books to: \_\_\_\_\_ Phone: \_\_\_\_\_

Email: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Training Organization Name: \_\_\_\_\_

	✓ <b>Select one (1) from the list below</b>	<b>Select</b>
AWS A2.4	Standard Symbols for Welding, Brazing and Nondestructive Examination	
AWS A3.0	Standard Welding Terms and Definitions	
AWS WHB 1.10	Welding Handbook Volume 1 (Welding and Cutting Science and Technology)	
AWS WHB 2.9	Welding Handbook Volume 2 (Welding Processes, Part I)	
AWS WHB 3.9	Welding Handbook Volume 3 (Welding Processes, Part 2)	
AWS WHB 4.9	Welding Handbook Volume 4 (Materials and Applications, Part 1)	
AWS WHB 5.9	Welding Handbook Volume 5 (Materials and Applications, Part2)	
AWS EWH-All	Effects of Welding on Health Vol. I-XII, Plus Index	
AWS B2.1	Specification for Welding Procedure and Performance Qualification	
	✓ <b>Select two (2) from the list below</b>	
AWS B1.10	Guide for the Nondestructive Examination of Welds	
AWS B1.11	Guide for the Visual Examination of Welds	
AWS B4.0	Standard Methods for Mechanical Testing of Welds	
AWS C5.3	Recommended Practices for Air Carbon Arc Cutting and Gouging	
AWS C5.5/C5.5M	Recommended Practices for Gas Tungsten Arc Welding	
AWS C5.10/C5.10M	Recommended Practices for Shielding Gases for Welding and Cutting	
	✓ <b>Select five (5) from the list below</b>	
AWS AWS	Arc Welding and Cutting Safety	
AWS SGSH	The Independent Shop's Guide to Welding Safety and Health	
AWS F2.2	Lens Shade Selector	
AWS F2.3	Specification for Use and Performance of Transparent Welding Curtains and Screens	
AWS F3.2M/F3.2	Ventilation Guide for Weld Fume	
AWS Fumes & Gases	Fumes and Gases in the Welding Environment	
AWS FSW	Fire Safety in Welding and Cutting	
AWS OWS	Oxyfuel Gas Welding, Cutting, and Heating Safety	
AWS SP	Safe Practices	
AWS C4.2/C4.2M	Recommended Practices for Safe Oxvfuel Gas Cutting Torch Operation	
AWS GWF	Guide for Setting up a Welder Training Facility	



The following publications are available as free downloads at [www.aws.org/technical/facts](http://www.aws.org/technical/facts)

ANSI Z49.1	Safety in Welding, Cutting, and Allied Processes	Free Download
Fact Sheets	Safety and Health Fact Sheets	Free Download

Which SENSE Level(s) is your organization registering for?

Level I (\$500)

Levels I and II (\$600)

Level II Upgrade\* (\$100)

\* Only choose this option if your organization is already Level I-registered and wants to add Level II to its program.

Method of Payment			
Bill organization by submitting purchase order ( <b>staple P.O. to front page of packet</b> )		P.O. #:	
All checks and money orders made payable to AWS.		Check or money order #:	
Visa <input type="checkbox"/> MC <input type="checkbox"/> AMEX <input type="checkbox"/> Discover <input type="checkbox"/>			
CC#:	/ / /	EXP:	/ CVV:
Signature:			

### Submission

Once you are ready, please submit the completed SENSE forms and EIM application (if applicable) to AWS at the following address:

**American Welding Society**  
**Education & Training Department**  
**8669 NW 36<sup>th</sup> Street**  
**Miami, FL 33166**

If paying with a purchase order, you may scan and email your application to [sense@aws.org](mailto:sense@aws.org).

AWS USE ONLY		
Date Received:	Account #:	Amount:





American Welding Society®  
MEMBERSHIP

8669 NW 36 ST. #130 | Miami, FL 33166-6672  
T: 800.443.9353 | F: 305.443.5647 | [aws.org](http://aws.org)

# Application for Corporate Membership

## ORGANIZATION INFORMATION (Please Print)

Has Your Company Ever Been an AWS Member?  Yes  No If Yes, Member No.: \_\_\_\_\_

Organization Name Please indicate on the line below how you would like your company's name to appear on your Plaque/Certificate, including all capitalizations, abbreviations and punctuation.  
Company name, address and phone are required.

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State/Province: \_\_\_\_\_ Zip/Postal Code: \_\_\_\_\_ Country: \_\_\_\_\_

Phone: \_\_\_\_\_ Website URL: \_\_\_\_\_ Major Product or Service: \_\_\_\_\_

Primary Contact Name: \_\_\_\_\_

Primary Address: \_\_\_\_\_

City: \_\_\_\_\_ State/Province: \_\_\_\_\_ Zip/Postal Code: \_\_\_\_\_ Country: \_\_\_\_\_

Primary Email: \_\_\_\_\_ Primary Phone: \_\_\_\_\_

The Primary Contact will be responsible for managing the company's membership. Annual invoices and other membership information will be sent to this person. They will also be able to manage the company's membership online. The Primary Contact will not be considered an individual AWS member, unless they are also listed in one of the Corporate Roster positions.

**Corporate Class:**  Manufacturer  End User  Distributor  Educational Institution  Affiliate Organization  Other (List)

**No. of Employees at this address:**  Less than 10  10-49  50-99  100-249  250-499  500-999  1,000-2,499  Over 2,500

## MEMBERSHIP BENEFITS BY CORPORATE TYPE

	Individual Memberships Included on Roster	Corporate Membership Recognition	Sustaining Primary Benefit (Choose One)	Distributor Book Selection (Choose Two)
<b>Supporting</b>	5	Plaque	N/A	N/A
<b>Welding Distributor</b>	5	Plaque	N/A	<input type="checkbox"/> Welding Metallurgy <input type="checkbox"/> Design & Planning <input type="checkbox"/> Welding Encyclopedia
<b>Educational Institution</b>	3	Plaque	N/A	N/A
<b>Affiliate</b>	1	Certificate	N/A	N/A

## DUES AND FEES

	New Corporate Membership Initiation Fee (one time only)	Annual Dues	Additional Membership Initiation Fees (\$12 / New Roster Member)	Hyperlink on AWS Website
<b>Supporting</b>	\$0.00	\$440.00	Waived	<input type="checkbox"/> \$100 (one time only)
<b>Distributor</b>	\$0.00	\$545.00	Waived	<input type="checkbox"/> \$100 (one time only)
<b>Educational Institution</b>	\$0.00	\$264.00	Waived	<input type="checkbox"/> \$100 (one time only)
<b>Affiliate</b>	\$0.00	\$200.00	Waived	<input type="checkbox"/> \$100 (one time only)
<b>TOTAL</b> (Enter Amount from Each Column)		\$ _____	\$ _____	\$ _____

▶ Access **Sustaining Membership Application** online, visit <http://www.aws.org/membership/corporate>

**TOTAL DUE**

\$ \_\_\_\_\_

## PAYMENT INFORMATION

Payment can be made (in U.S. dollars) by check or money order (international), payable to the American Welding Society.

Check  Money Order

AMEX  Diners Club  MasterCard  Visa  Discover  Other

Application Date: \_\_\_\_\_

Name on Card: \_\_\_\_\_ CC#: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Expiration Date (mm/yy): \_\_\_\_\_ / \_\_\_\_\_ CVV: \_\_\_\_\_ Applicant Signature: \_\_\_\_\_

Billing Address: \_\_\_\_\_ City/State/Zip: \_\_\_\_\_ Country: \_\_\_\_\_

**OFFICE USE ONLY** Source Code: \_\_\_\_\_ Account #: \_\_\_\_\_ Check #: \_\_\_\_\_ Amount: \_\_\_\_\_

Date: \_\_\_\_\_ AWS Staff: \_\_\_\_\_



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# Application for Corporate Membership

Use the following space to add individuals to your company's corporate membership roster. **Please refer to the Membership Benefits section on the first page to determine how many roster memberships are included with your Corporate membership.** You may add additional members for \$88 per member. Name, address, phone and email are required.

<b>MEMBER 1</b>	Were you ever an AWS Member? <input type="checkbox"/> Yes <input type="checkbox"/> No	Member No.:
<input type="checkbox"/> Mr. <input type="checkbox"/> Ms. <input type="checkbox"/> Mrs. <input type="checkbox"/> Dr. Last: _____ First: _____ M.I.: _____ Birthday: _____ Mailing Address: _____ City, State, Country, Zip: _____ E-Mail: _____ Phone: _____ Use information from list below to answer these questions: Business (enter 1): _____ Job Classification (enter 1): _____ Technical Interests: _____		

<b>MEMBER 2</b>	Were you ever an AWS Member? <input type="checkbox"/> Yes <input type="checkbox"/> No	Member No.:
<input type="checkbox"/> Mr. <input type="checkbox"/> Ms. <input type="checkbox"/> Mrs. <input type="checkbox"/> Dr. Last: _____ First: _____ M.I.: _____ Birthday: _____ Mailing Address: _____ City, State, Country, Zip: _____ E-Mail: _____ Phone: _____ Use information from list below to answer these questions: Business (enter 1): _____ Job Classification (enter 1): _____ Technical Interests: _____		

<b>MEMBER 3</b>	Were you ever an AWS Member? <input type="checkbox"/> Yes <input type="checkbox"/> No	Member No.:
<input type="checkbox"/> Mr. <input type="checkbox"/> Ms. <input type="checkbox"/> Mrs. <input type="checkbox"/> Dr. Last: _____ First: _____ M.I.: _____ Birthday: _____ Mailing Address: _____ City, State, Country, Zip: _____ E-Mail: _____ Phone: _____ Use information from list below to answer these questions: Business (enter 1): _____ Job Classification (enter 1): _____ Technical Interests: _____		

<b>MEMBER 4</b>	Were you ever an AWS Member? <input type="checkbox"/> Yes <input type="checkbox"/> No	Member No.:
<input type="checkbox"/> Mr. <input type="checkbox"/> Ms. <input type="checkbox"/> Mrs. <input type="checkbox"/> Dr. Last: _____ First: _____ M.I.: _____ Birthday: _____ Mailing Address: _____ City, State, Country, Zip: _____ E-Mail: _____ Phone: _____ Use information from list below to answer these questions: Business (enter 1): _____ Job Classification (enter 1): _____ Technical Interests: _____		

<b>MEMBER 5</b>	Were you ever an AWS Member? <input type="checkbox"/> Yes <input type="checkbox"/> No	Member No.:
<input type="checkbox"/> Mr. <input type="checkbox"/> Ms. <input type="checkbox"/> Mrs. <input type="checkbox"/> Dr. Last: _____ First: _____ M.I.: _____ Birthday: _____ Mailing Address: _____ City, State, Country, Zip: _____ E-Mail: _____ Phone: _____ Use information from list below to answer these questions: Business (enter 1): _____ Job Classification (enter 1): _____ Technical Interests: _____		

BUSINESS	JOB CLASSIFICATION	TECHNICAL INTERESTS
A Contract Construction	01 President, Owner, Partner, Officer	A Ferrous Metals
B Chemicals & Allied Products	02 Manager, Director, Superintendent (Or Assistant)	B Aluminum
C Petroleum & Coal Industries	03 Sales	C Nonferrous Metals Except Aluminum
D Primary Metal Industries	04 Purchasing	D Advanced Materials/ Intermetallics
E Fabricated Metal Products	05 Engineer — Welding	E Ceramics
F Machinery Except Electric (Incl. Gas Welding)	20 Engineer — Design	F High Energy Beam Processes
G Electrical Equipment, Supplies, Electrodes	21 Engineer — Manufacturing	G Arc Welding
H Transport Equip. — Air, Aerospace	06 Engineer — Other	H Brazing and Soldering
I Transport Equip. — Automotive	10 Architect Designer	I Resistance Welding
J Transport Equip. — Boats, Ships	12 Metallurgist	J Thermal Spray
K Transport Equip. — Railroad	13 Research & Development	K Cutting
L Utilities	22 Quality Control	L NDT
M Welding Distributors & Retail Trade	07 Inspector, Tester	M Safety and Health
N Misc. Repair Services (Including Welding Shops)	08 Supervisor, Foreman	N Bending and Shearing
O Educational Services (Univ., Libraries, Schools)	14 Technician	O Roll Forming
P Engineering & Architectural Services (Including Assns.)	09 Welder, Welding or Cutting Operator	P Stamping and Punching
Q Misc. Business Services (Including Commercial Labs)	11 Consultant	Q Aerospace
R Government (Federal, State, Local)	15 Educator	R Automotive
S Other	17 Librarian	S Machinery
	16 Student	T Marine
	18 Customer Service	U Piping and Tubing
	19 Other	V Pressure Vessels and Tanks
		W Sheet Metal
		X Structures
		Y Other
		Z Automation
		1 Robotics
		2 Computerization of Welding