CRAW Approved Testing Center (ATC) Program Information

(The enclosed documents provide information about the
AWS CRAW Approved Testing Center.)

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Technical Documents

(These documents are available for downloading at the AWS website.
Please click on the document name and you will be redirected to the AWS Website.)
(It is recommended that the facility applying for the CRAW ATC have these documents on file.)

- **QC19-2002, Specification for AWS Certification of Robotic Arc Welding Personnel**
- **D16.4-2005, Specification for the Qualification of Robotic Arc Welding Personnel**
- **Procedure for Authorizing AWS Approved Testing Centers**
- **CRAW Candidate Performance Test Information Booklet**

Steps to Becoming an ATC

1. The following documents must be submitted to AWS in order to apply to become an Approved Testing Center (ATC):

   - ATC Initial on-Site Audit Application
   - Schematic of Examination Work Cell
   - Organizational Chart
   - Procedures on Material Traceability/Security/Privacy/Registration/Fees

     Note: There are currently no up-front fees for the ATC Program due at the time of application.

   Mail the documents indicated above to the following address:

   American Welding Society
   8669 NW 36 St, #130
   Miami, FL 33166-6672

2. Following a satisfactory review of the facility's application and supporting documents, AWS will schedule an on-site audit of your facility by a third party auditor. ATC applicants are responsible for auditor's fees, and travel expenses including airfare, transportation, lodging and meals. Refer to ATC Initial Onsite Audit Application for applicable fees.

3. If necessary, the auditor will also administer the CRAW-T written and performance examinations to the test supervisor(s). Test Supervisors are required to be certified as an AWS Certified Robotic Arc Welding Technician (CRAW-T) before they are able to administer the testing for this program.

4. When the audit is completed, the auditor will determine if the facility should be recommended for an Approved Testing Center.

5. Results of the audit will be presented to the AWS Certification Committee for final approval. If the facility is approved to become and ATC, a certificate of approval will be issued.

6. Once approved, the facility can begin testing individuals for CRAW certification.

Instructions for CRAW Approved Testing Center (ATC) Application

OVERVIEW

Prior to applying, applicants should review the requirements of the AWS QC19, *Specification for AWS Certification of Robotic Arc Welding Personnel Program* and AWS D16.4, *Specification for the Qualification of Robotic Arc Welding Personnel*, and <supporting administrative documents> to ensure that their facility meets the programs requirements. Successful applicants will be named an AWS Approved Testing Center (ATC) and will be able to provide training and testing of individuals seeking certification as AWS Certified Robotic Arc Welding Operators (CRAW-O) and AWS Certified Robotic Arc Welding Technicians (CRAW-T).

APPLICANT INFORMATION

Facility Name

Fill out the applicant instruction with the legal name of the facility to be approved as an AWS Approved Testing Center. The name provided in the application will be the name printed on the certificate and listed on the AWS website under ATCs.

Street Address

The street address shall be the actual physical address of the testing center. The address given shall not be the administrative office or the headquarters of the company unless they are the same. No PO Boxes will be accepted as the street address.

Facility Representative

The facility representative is the person responsible for organizing and responsible for the training and testing scheduling activities related to the CRAW program. This individual would perform many of the administrative functions associated with the CRAW program.

Main Contact

The main contact is the primary contact between AWS and the facility concerning the application and the audit activities. This may be the same individual as the facility representative. AWS will direct all correspondence through this individual for the purpose of the application and audit.

TEST SUPERVISORS INFORMATION

Each ATC is required to designate 1-2 Test Supervisors for the ATC program. Test Supervisors must be CWIs. The Test Supervisors can be employed by the facility or contracted and must be certified as a Certified Robotic Arc Welding -Technician (CRAW-T) to administer/proctor testing for the program.

Testing of a CWI who qualifies for CRAW-T certification can be arranged with AWS to meet this requirement and is performed during the ATC audit. Note: This individual shall not conduct any training or preparatory activities for candidates to whom they will test for AWS CRAW-T or CRAW-O certification.

ON-SITE AUDIT

Select up to 4 dates in order of your highest preference. You may select a specific day or a range of days. You may list less than 4 dates or date ranges. If AWS cannot accommodate any of the dates provided, AWS will contact you to schedule an audit date.

ENCLOSED MATERIALS

There will be at least four or more documents that need to be provided to AWS with this application. The documents will include this application, a schematic of the robotic work cell where the performance testing will be done, an organizational chart showing the separation of the training and testing functions within your organization, and program procedures.

Application

The application must be completely filled out.

Schematic

The schematic of the robotic work cell shall provide the dimensions of the work cell, manufacturer and model of the equipment in the work cell, and safety features of the work cell. The work cell shall be setup in such a manner to allow the facility to test candidates for the CRAW program.

Organizational Chart

The organizational chart shall show how administrative, testing, and training personnel are organized within the reporting structure of the organization. The facility shall ensure that there is complete separation between the training and testing personnel. The organizational chart shall include individuals' names.

Procedures

The facility shall have procedures or documents that:

1) ensures the traceability of all test materials (filler and base metals) used in the robotic performance testing
2) ensures examination materials are secured and handled properly and that confidentiality of the exam material is maintained
3) ensures personal information about candidates is handled in accordance with standard privacy practices
4) ensures proper monitoring and tracking of candidate registrations and CRAW testing appointments
5) show the ATC fee structure established for providing any training and administrative support provided to candidates for the submission of applications to AWS for CRAW-T and CRAW-O certification exams

All required documents must be received by AWS for the ATC application package to be considered complete. If any of the documents are missing from the ATC application package, then the ATC package will be considered incomplete. The consequence of not submitting all of the documents required for review could result in a delay in the approval of your facility. An auditor is only assigned after the facility has submitted all required documents for review.

Approved Testing Center
Initial Onsite Audit Application

American Welding Society
8669 NW 36 St, # 130
Miami, FL 33166-6672
Tel. 786-937-9643
accreditation@aws.org

We hereby request the American Welding Society approve the following facility as a participant in the AWS Certified Robotic Arc Welding Program in accordance with the provisions of AWS QC19, *Specification for AWS Certification of Robotic Arc Welding Personnel Program* and supporting administrative documents.

APPLICANT INFORMATION

Facility Name: _____

Street
Address: _____

City: _____ State _____ Zip _____

Phone: _____ Ext _____ Fax: _____

Website: _____

Facility Representative Contact Information

Facility Representative: _____

Phone: _____ Ext _____ Fax: _____

Email: _____

Main Contact Information (if different than facility representative)

Main Contact Name: _____

Phone: _____ Ext _____ Fax: _____

Email: _____

CRAW
AWS CERTIFIED ROBOTIC ARC WELDING

Approved Testing Center
Initial On-Site Audit Application

TEST SUPERVISORS INFORMATION

Primary Test Supervisor Information

Test Supervisor Name: _____

Phone: _____ Ext _____ Fax: _____

Email: _____ CWI # _____

Alternate Test Supervisor Information (optional)

Test Supervisor Name: _____

Phone: _____ Ext _____ Fax: _____

Email: _____ CWI # _____

ON-SITE AUDIT

Please allow 4-6 weeks for On Site Audit scheduling.

Preferred Audit Dates: 1) _____   2) _____

3) _____   4) _____

APPLICATION FEES

There are currently no up-front application fees for the ATC program; however, ATC applicants are responsible for auditor's fees and travel expenses including airfare, transportation, lodging, and meals. Auditor's fees are:
- Domestic: $300 for audit (one day) and $150 per travel day (up to two days)
- International: $400 for audit (one day) and $200 per travel day (up to three days)

Approved Testing Center
Initial On-Site Audit Application

ENCLOSED MATERIALS

ATC Initial Onsite Audit Application (including ATC Audit Checklist): Enclosed   Yes ☐   No ☐

Schematic of Examination Work Cell: Enclosed   Yes ☐   No ☐

- if not developed, please give expected completion date: _____

Organizational Chart: Enclosed   Yes ☐   No ☐
- showing relationship of training and testing personnel

Procedures/documents on Material Traceability,
Exam Security, Candidate Privacy, Registration,
and Fee Structure: Enclosed   Yes ☐   No ☐

> **All required documents must be received by AWS for the ATC application package to be considered complete. If any of the documents are missing from the ATC application package, then the ATC package will be considered incomplete. The consequence of not submitting all of the documents required for review could result in a delay in the approval of your facility. An auditor is only assigned after the facility has submitted all required documents for review.**

AWS USE ONLY

AWS Account Number:

American Welding Society
8669 NW 36 St., #130, Miami, Florida 33166-6672

ATC
On-Site Audit Checklist

Instructions: Please address each item. Check yes or no and if there is a supporting procedure/ document, indicate the procedure name or document ID. Procedures/Documents indicated should be submitted as attachments to this application. Those items where a supporting procedure/document would not be available have N/A in this column. The last two columns should not be completed. These columns will be used by the AWS Auditor during the on-site audit.

Example:

TOPIC					
	Y	**N**	**Procedure Name or Document ID** (when applicable)	**Auditor Review of Requirements Sat/Unsat.**	**Auditor Confirmation of Implementation Sat/Unsat.**
1) Is there a designated Facility Representative for the ATC?	X		Organizational Chart		

On-Site Audit Checklist Questions Part I to VI

(Important Note: Be sure to read the requirements on the Checklist as they may contain more detailed information that what is required for your supporting procedures/documents.)
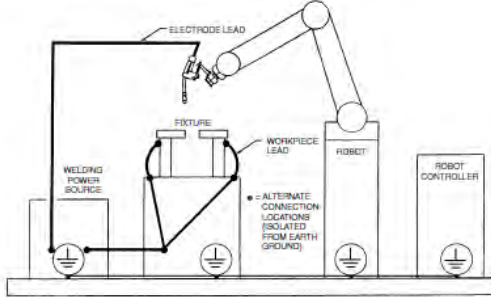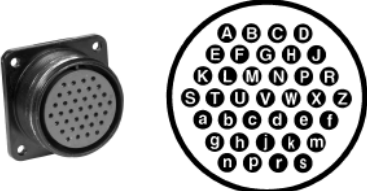
PART I – FACILITY AND EQUIPMENT FOR PERFORMANCE TESTING					
	Y	**N**	**Procedure Name or Document ID** (when applicable)	**Auditor Review of Requirements Sat/Unsat.**	**Auditor Confirmation of Implementation Sat/Unsat.**
1) Briefly describe the arc welding robotic equipment designated for ATC use?					
2) Can the following be identified on the work cell? [Ref: D16.2, Figure 1]					
a) Robot Controller		N/A			
b) Teach Pendant		N/A			
c) Remote Operator Panel (optional), identify if present		N/A			
d) CRAW Fixturing		N/A			
e) Common Base		N/A			
f) Workpiece Lead		N/A			
g) Robot Arm Power Cable		N/A			
h) Operator Panel Interface Cable		N/A			
i) Torch Cleaning Station (optional), identify if present		N/A			
j) Weld Control Interface Cable		N/A			
k) Water Chiller System (optional), identify if present		N/A			
l) Welding Power Supply		N/A			

	Y	N	Procedure Name or Document ID (when applicable)	Auditor Review of Requirements Sat/Unsat.	Auditor Confirmation of Implementation Sat/Unsat.
m) Weld Interface Cable			N/A		
3) Is the following present in the work cell and in good working order? [Ref: D16.2, Table D.1]					
Welding Torch					
a) torch assembly			N/A		
b) torch gooseneck			N/A		
c) torch adaptor to wire feeder			N/A		
d) contact tips			N/A		
e) gas diffuser			N/A		
f) nozzles			N/A		
g) torch liners			N/A		
h) torch mount to robot			N/A		
i) adaptor plate for mount			N/A		
Welding Equipment					
a) set of drive rolls for the wire feeder			N/A		
b) wire guides for the wire feeder			N/A		
c) wire feeder control cable			N/A		
d) water circulator (water cooled guns)			N/A		
e) water flow switch (water cooled guns)			N/A		
f) work lead return path			N/A		
g) welding wire conduit			N/A		
h) spare wire feeder (not required-must be identified prior to examination, if applicable.)			N/A		
i) spare power source (not required-must be identified prior to examination, if applicable.)			N/A		
j) ground brushes or rotary ground (not required-must be identified prior to examination, if applicable.)			N/A		
Robot Equipment					
a) teach pendant with cable			N/A		
b) remote secondary enable control			N/A		
c) fuses for robot control (not required-must be identified prior to examination, if applicable.)			N/A		
d) robot axis identification marks			N/A		

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	Y	N	Procedure Name or Document ID (when applicable)	Auditor Review of Requirements Sat/Unsat.	Auditor Confirmation of Implementation Sat/Unsat.
3) Is the following present in the work cell and in good working order? *(Continued)* [Ref: D16.2, Table D.1]					
System Equipment					
a) CRAW coupon fixture(s)			N/A		
b) cutter for reamer, if used (not required-must be identified prior to examination, if applicable.)			N/A		
c) rotary, translational, or compound fixture positioner			N/A		
d) light curtain			N/A		
e) safety mat			N/A		
f) PLC (not required-must be identified prior to examination, if applicable.)			N/A		
g) operator screen (not required-must be identified prior to examination, if applicable.)			N/A		
h) perimeter fixed barrier guarding			N/A		
i) awareness signal or signage			N/A		
j) perimeter guarding UV protection			N/A		
k) ingress and egress locations identified			N/A		
l) system safety signage: compliant with ANSI/AWS D16.1 and ANSI Z49.1, et. al.			N/A		
4) Can the safety features of the work cell be identified and demonstrated?			N/A		
5) Does the system have a remote enabling device, which is required when one or more individuals are trained by an instructor [D16.3]?			N/A		
Figure 3—Typical Robot Weld Circuit 6) Can the facility identify the system ground and work lead return path according to D16.2 requirements?			N/A		
7) Do you have a weld interface cable that meets the requirements of AWS D16.2 (1) physical pin layout or (2) suitable serial connection? (Note: Functions as indicated in Table 1 of D16.2)			N/A		

	Y	N	Procedure Name or Document ID (when applicable)	Auditor Review of Requirements Sat/Unsat.	Auditor Confirmation of Implementation Sat/Unsat.
8) Is the work cell suitable for conducting a CRAW performance test?			N/A		
9) Destructive Examination:					
a) Does the facility have the capability to conduct a polish and etch inspection examination?					
b) Does the facility have the capability to conduct other destructive testing?					

PART II – FACILITY FOR WRITTEN EXAMINATION

	Y	N	Procedure Name or Document ID (when applicable)	Auditor Review of Requirements Sat/Unsat.	Auditor Confirmation of Implementation Sat/Unsat.
1) Is there a room available for written examinations?			N/A		
2) Room Conditions (conducive to test taking?):					
a) Is there adequate lighting in the exam room?			N/A		
b) Is the area surrounding the room quiet?			N/A		
c) Is there adequate space for testing in the exam room?			N/A		
d) If there is a phone in the room, can the phone be turned off or disconnected?			N/A		
e) Are there restrooms that are located near the exam room?			N/A		

PART III – EXAMINATION SECURITY (supporting procedure required, see Part VI)

	Y	N	Procedure Name or Document ID (when applicable)	Auditor Review of Requirements Sat/Unsat.	Auditor Confirmation of Implementation Sat/Unsat.
1) Does the facility have procedures/documents that ensure examination materials are secured and handled properly and that the confidentiality of the exam is maintained, including the following?					
a) Remote testing capabilities (if applicable)					
b) When the CRAW-T trains test candidates, testing of the candidates is arranged so another individual administers testing.					
c) Controls for handling the receipt of confidential exam material.					
d) Availability of a locked storage room.					
e) What personnel have access to the storage room where exam material would be stored?					

PART IV – PERSONNEL (organizational chart required)

	Y	N	Procedure Name or Document ID (when applicable)	Auditor Review of Requirements Sat/Unsat.	Auditor Confirmation of Implementation Sat/Unsat.
1) Is there a designated Facility Representative for the ATC?					
(a-#1) Name and Title:					
(b-#2) Name and Title:					

	Y	N	Procedure Name or Document ID (when applicable)	Auditor Review of Requirements Sat/Unsat.	Auditor Confirmation of Implementation Sat/Unsat.
2) Who are the designated Test Supervisor(s)?					
(a-Primary) Name, title, email, and phone:					
(b-Secondary) Name, title, email, and phone:					
b) Will any CRAW-T Test Supervisors be involved in training individuals that will be testing for CRAW O/T?					
(#1) Name and Title:					
(#2) Name and Title:					
5) Have personnel responsible for receipt and shipping of AWS test materials been identified?					
(a-#1) Name, Title, Email, and Phone:					
(b-#2) Name, Title, Email, and Phone:					

PART V – TEST SUPERVISOR QUALIFICATION

	Y	N	Procedure Name or Document ID (when applicable)	Auditor Review of Requirements Sat/Unsat.	Auditor Confirmation of Implementation Sat/Unsat.
1) Has the primary Test Supervisor named above demonstrated the ability to administer the Part B Practical Performance Test properly? [NOTE: TO BE ADDRESSED AT TIME OF AUDIT ONLY.]			N/A		
2) Has the primary Test Supervisor named above demonstrated the ability to administer the Part a Written General Knowledge Test properly? [NOTE: TO BE ADDRESSED AT TIME OF AUDIT ONLY.]			N/A		

PART VI – PROCEDURES/DOCUMENTS (required for key activities)

	Y	N	Procedure Name or Document ID (when applicable)	Auditor Review of Requirements Sat/Unsat.	Auditor Confirmation of Implementation Sat/Unsat.
1) Does the facility have procedures/documents to assure the traceability of all test materials (including purchase and storage of filler and base metals) used in the robotic performance testing?					
2) Are Mill Reports available for test materials used in the CRAW robotic performance examination?					
3) Does the facility have procedures/documents that ensure examination materials are secured and handled properly and that the confidentiality of the exam is maintained?					
4) Does the facility have procedures/documents that ensure personal information about candidates is handled in accordance with standard privacy practices?					
5) Does the facility have procedures/documents for monitoring and tracking candidate registrations and certification testing appointments?					

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	Y	N	Procedure Name or Document ID (when applicable)	Auditor Review of Requirements Sat/Unsat.	Auditor Confirmation of Implementation Sat/Unsat.
6) Does the facility have the following documents in the ATC library, where they are readily available to staff?					
a) AWS D16.1, *Specification for Robotic Arc Welding Safety*			N/A		
b) AWS D16.2, Guide for Components of *Robotic and Automatic Welding Installations*			N/A		
c) AWS D16.3, *Risk Assessment Guide for Robotic Arc Welding*			N/A		
d) AWS D16.4, *Specification for the Qualification of Robotic Arc Welding Personnel*			N/A		
e) AWS QC19:2002, *Specification for AWS Certification of Robotic Arc Welding Personnel*			N/A		
f) AWS *Procedure for Authorizing AWS Approved Testing Centers*			N/A		
g) *Performance Test Candidate Information Booklet* for the CRAW-O/T Certified Robotic Arc Welding Operator and Technician Examination			N/A		
h) *Certified Robotic Arc Welding Application* for CRAW O/T certification			N/A		

*** If more space is needed to answer any of the Checklist questions, please feel free to attach additional answers or relevant information to the back of this checklist.**

The statement below does not need to be signed at time of application. It will be signed following the on-site audit.

STATEMENT OF COMPLIANCE

The undersigned facility representative hereby agrees to abide by all rules and policies instituted by the American Welding Society in the administration of the Certified Robotic Arc Welding certification program. Violation of any rules or policies may result in immediate revocation of approval. All materials distributed by AWS remain the property of AWS and must be returned upon request. The facility representative agrees to protect the confidentiality of all AWS test materials to the best of his/her ability.

Signature of Facility Representative:

Printed Name: Date:

Title:

American Welding Society
8669 NW 36 St., #130, Miami, Florida 33166-6672

FOR AWS AUDITOR USE ONLY (to be completed by AWS Auditor)

Auditor's Comments: (Use additional sheet for comments, if needed.)

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CRAW

AWS CERTIFIED ROBOTIC ARC WELDING APPROVED TESTING CENTER

American Welding Society
8669 NW 36 St., #130, Miami, Florida 33166-6672

FOR AWS AUDITOR USE ONLY (to be completed by AWS Auditor)

Name of AWS Auditor:	
AWS Auditor's Email:	
Date of Audit:	

List any nonconformances (NCRs) observed:

Were all nonconformances discussed with the applicable facility personnel?   Yes ☐   No ☐

Is corrective action necessary?   Yes ☐   No ☐

If yes, date corrective action is due to AWS Auditor _____

Auditor's Recommendation for Facility to be Approved as an AWS ATC:	
Recommend approval of facility as AWS ATC, pending NCRs satisfied	
Follow-up audit required	
Recommend approval of facility as AWS ATC	
Failed audit (facility will need to reapply)	

Auditor's Signature _____   Date _____

Facility Representative Signature _____   Date _____

Date presented to AWS Certification Committee: _____

A copy of this complete report shall be provided to the Facility Representative by the AWS Auditor.