



# IIW India - ANB

## WELDERS' APPROVAL TESTING & CERTIFICATION



The Indian Institute Of Welding (IIW-India) is a member of the International Institute of Welding (IIW) which was created in 1948 and now has 52 members. IIW-India has been accredited by IIW as its only 'Authorised National Body' (ANB) in India (To be referred to as ANB-India) to operate its international schemes on Education/training, Qualification, certifications and award International Welding Diplomas to welding personnel at various responsibility and job levels including International Welder (IW) for different processes and materials at three skill levels fully explained in a detailed guideline.

The diploma at any level of 'International Welder' also includes an additional renewable certification for practical skill tests as per ISO 9606-1 or EN 287-1 or IS 7310 or under ASME Section IX.

The Indian Institute of Welding has now initiated the regular activity for **Welders' Approval Testing and Certification** to meet industry demand for Certification of experienced welders already engaged in welding job in order to meet their own Quality System including requirement under ISO 3834 or to comply with their customer or collaborator's specification. The renewable certificates may be issued as per ISO 9606 / EN287 / IS 7310 or under ASME Sec IX or based on their internal standard.

### 1. What is Certification

*Certification* refers to the confirmation of certain characteristics of an object, person, or organization. One of the most common types of certification is professional certification, where a person is certified as being able to competently complete a job or task, usually by the passing of an examination/test.

*Certification* does not refer to the state of legally being able to practice or work in a profession. That is *licensure*. Usually, licensure is administered by a governmental entity for public protection purposes and certification by a professional association.

However, they are similar in that they both require the demonstration of a certain level of knowledge or ability. Qualification is historical fact but Certification with validity period reflects the current state of knowledge and skill.

### 2.0 Approval of Welding Procedure and Welder Approval Test Certification

An **Application Standard or Code of Practice** will include requirements or guidelines on material, design of joint, welding process, welding procedure, welder qualification and inspection or may invoke other standards, for example for welding procedure and welder approval tests. The manufacturer will normally be required to approve the welding procedure and welder qualification. The difference between a welding procedure approval and a welder qualification test is as follows:

- ✓ The welding procedure specification (**WPS**) approval test is carried out by a competent welder based on a provisional WPS (**pWPS**) and the quality of the weld is assessed using visual, non-destructive and mechanical testing techniques according to applicable standard/code. The intention is to demonstrate that the proposed welding procedure will produce a welded joint which will satisfy the specified requirements of weld quality and mechanical properties. This enables creation of Welding Procedure Qualification Record (**WPQR**)
- ✓ The **Welder Approval Test** examines a welder's skill and ability in producing a satisfactory test weld conforming to specified welding code/standard. The test may be performed with or without a qualified welding procedure (note, without an approved WPS the welding parameters must be recorded).

### 2.0 Welder's Certification by IIW-India ANB

The requirements for approvals are determined by the relevant application standard or as a condition of contract. Application standards and codes of practice ensure that a structure or component will have an acceptable level of quality and be fit for the intended purpose. As explained, the Welders Approval Certification is also a specific requirement under ISO 3834 apart from engaging qualified Welding Co-ordinators like IWE, IWT, IWS & IWP & Welding Inspection Personnel (IWIP). *The Indian Institute of Welding with its ANB and 12 Branches and Chapters are in a unique position to deliver this service package.*

### 3.0 Responsibility of IIW- India ANB Authorised Examiner

IIW- India ANB appointed Authorised Examiners as per International Institute of Welding Authorisation Board is allowed to witness Welder's certification test and Interview Candidates as provided in IW Guideline. The duties are;

### **Before starting test**

- a) Checking of the welder's identity (e.g. Photo Identity Card of employer etc.)
- b) Checking of the WPS and handing it over to the welder
- c) Checking of the test piece  
Parent material (identification), Dimensions (thickness, length and diameter), Joint preparation (acc. to WPS), Stamping (welder's and examiner's stamps), Checking the tack welds in the test piece, Identification of the welding consumables (acc. to WPS)

### **During the test**

- a) Joint & Welding parameters (acc. to WPS) e.g.  
Current, Polarity, Voltage, Wire feed speed, stand-off distance, Gas flow rate
- b) Interruption of root- and capping run, Possible permission for repair (Note! Weld imperfections on capping runs must not be removed), Weld time (reasonable)
- c) Interruption of the test (if welder's capability to carry out the test is insufficient)

### **After welding**

- a) Make sure that test specimens are prepared according to the requirements of EN 287 / ISO 9606/ Certifying Code
- b) Make sure that the required test as applicable for the particular approval test are carried out (test reports) Visual inspection, Radiography, Fracture tests, Macro examination, Bend tests, Magnetic particle testing, Penetrant testing, Transverse tensile test and verify that destructive and non-destructive tests for qualification testing of welders are carried out by competent inspection personnel./NABL Laboratory
- c) That the acceptance levels are fulfilled as per specified acceptance levels of applicable Code/Standard & ensure all records are maintained for scrutiny / audit
- d) Signing of the welder's certificate as per Approved Format. The printed certificate shall be decently made.

## **4.0 Procedure for Certification**

An Organisation seeking to sponsor their welders for Certification Examination/Test must write to IIW-India ANB &

- Provide details of their requirements i.e. the number of welders to be certified, Process, Joint type, position and material along with the applicable standard and inform whether the proper qualified WPS is available.
- Intimate the preferred location of conducting the approval Test and whether all Infrastructure facility of Space, Machine, Accessories, Test Coupons, Material and consumables shall be made available.
- The welding & other facilities offered shall be subject to approval by ANB-India to check conformance to prescribed standards.
- It is important that NDT and DT tests are carried out in a NABL accredited laboratory or an in-house laboratory with its approved QSM and internal checks and subject to certain conditions verifiable by IIW-India ANB representative/Authorised Examiner.
- ANB India may also assist in preparation of pWPS and WPQR for Qualification Examination on agreed terms.
- It will be essential for the organisation to forward fully completed individual welder's application in the prescribed Form attached with authenticated Photograph along with technically and commercially clear Order.
- IIW-India ANB recommends basic knowledge test of welders on Safety and Welding Standard/Codes at the time of Approval Test.

**Approval Test by ANB authorised Examiner will commence after all the above issues are resolved and the mutually agreed Approval Test schedule is finalised and also commercial terms are formally settled.**

## **5.0 Certification & Other Charges**

The charges will be intimated on application, based on the number of Welders to be certified, WPS & the process, material, joint type and position, applicable code/standard and location of the test centre and estimated number of days to be spent by the Authorised Examiner. All facilities for conducting the test including welding and safety equipment, test coupons, consumables and infrastructure to support the testing, DT and NDT tests at a NABL approved laboratory are assumed to be made available by the applicant organisation at its own cost unless otherwise agreed.

### *Head Office and Registered Office*

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## **The Indian Institute of Welding -ANB**

**Authorised National Body in India of the International Institute of Welding**

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