



# IIW- India ANB Announces

## THE ROUTES TO QUALIFY

AS

### International WELDING COORDINATION PERSONNEL IWE / IWT / IWS / IWP



The Indian Institute of Welding is a member of the International Institute of Welding (IIW) which was created in 1948 and now has 52 members. IIW have developed and administer a Unified International System for Education, Examination and Qualification of Welding Personnel, which is globally recognised and internationally accepted.

The Indian Institute of Welding has been accredited by IIW as its only 'Authorised National Body' (ANB) in India (to be referred to as ANB-India) to operate its above international scheme for Welding Coordination Personnel and award International Diplomas to welding personnel at various levels.

#### 1 International Welding Co Ordination Personnel: Why required ?

**Quality Assurance System:** The reliability of quality standard in general in an organisation is guided by the provisions of ISO 9000 series of standards. *Within the ISO 9000 series of standards for quality systems, welding is to be treated as a "special process" since welds cannot be fully verified by subsequent inspection and testing of the product to ensure that the required quality standards have been met. Quality cannot be inspected into a product; it has to be built into it.* Even the most extensive and sophisticated non-destructive testing does not improve the quality of welds. For welded construction to be effective and free from serious problem during in production and in service, it is necessary to provide controls from the design phase, through material selection, into process used for fabrication and subsequent inspection. Supervision at various levels needs to be implemented to ensure that the specified quality is maintained. **The manufacturing sectors using welding have to critically address three distinct areas with specific requirements;**

**1.1 Manufacturing Organisation:** covers all Welding Workshops or sites under same technical and quality management. With introduction of strict quality reliability standard, the wider introduction of ISO 3834 - "Quality Requirement for Welding-Fusion" welding of metallic materials (Equivalent to EN729) will become mandatory due to demand of quality sensitive customers especially from 42 IIW member countries who have already accepted recommendation of International Institute of Welding to implement ISO 3834 in stages over a period of time.

- Welded products are differently treated according to the specific needs of the welding manufacturing process.
- Manufacturers are guided to satisfy regional and international product standards requirements through implementation of ISO 3834.
- The specific areas of competence (for personnel & companies) are explicitly encompassed and registered in the schedule.
- Manufacturers get visibility through the Register ([www.iiw-iis.org](http://www.iiw-iis.org)) of certified companies.

**1.2 Welding coordination personnel:** All Personnel who have responsibilities in the manufacturing operation for welding and welding related activities and whose competence and knowledge have been demonstrated by training, education and relevant manufacturing experience are covered by **ISO14731**. *Welding coordination is considered as the responsibility of all manufacturing organisations using welding as a process and mandatory for those having ISO 3834 certification.*

In this context, the International Welding Diplomas of IWE, IWT, IWS & IWP are the preferred & recommended route for personnel responsible for welding supervision activities and to demonstrate their competence to be Welding Co-ordination personnel.

**1.3 Welding Inspection:** Examining, Testing and measuring of welding related matters form part of the whole system and is covered by **ISO 9712 / SNT – TC – 1A / IS: 13805** and **EN 12062**.

The activity is essential part of welding coordination as per ISO 14731 and IWIP qualification offered by IIW-India ANB fulfils this requirement

## 2. Guideline

**IAB-252-07 being updated with IAB-252-11-Guideline for Personnel with Qualification for Welding Coordination** for the International education, training, examination and qualification has been prepared by the International Authorisation Board (IAB) of the International Institute of Welding (IIW). The guideline covers the minimum requirements for education and training in terms of objectives, expected results and the teaching hours to be devoted to achieving them.

Students after qualifying may require obtaining additional knowledge & skill specific to the industry and his/her job function for attaining competence.

## 3. Benefits

### 3.1 Industry Advantage:

The IIW qualification system, administered by ANB India will provide a pool of welding personnel at all levels, trained to international standard for industry. This will also enable industry to fulfil the future requirements of ISO 3834 (Quality requirement for Welding) as well as ISO 14731 (Welding Co-ordination Task and Responsibilities), which will be particularly relevant for export-oriented industries.

### 3.2 Career for Welding Professionals:

Welding is a key technology and competency required for the fabrication and construction industries and requires qualified persons at various levels of skill and knowledge. The international Diplomas for welding coordination within the scope of ANB-India start from International Welding Practitioner and up-to International Welding Engineer as outlined below and offer opportunity for upward career progression. There is enormous scope to obtain overseas appointment at all levels for IIW Diploma holders starting from the ground level welder to highest engineer.

- **(IWE): International Welding Engineer** is the most knowledgeable in the profession to guide and advise for resolution of technical issues relating to actual welding, process & procedure, inspection, design of welding and fabrication technique, quality control with inputs of "state of the art". He is able to take the position of Welding Co-ordinator with full responsibility in most industries with diverse requirements for welding and fabrication with assured safety.
- **(IWT): International Welding Technologist** are may have lesser in depth technical knowledge and expertise than IWE to undertake work of the responsibility of weld design, selection of process & procedure for fabrication with safety and can take responsibility as Welding Co-ordinator in a manufacturing industry.
- **(IWS): International Welding Specialist** may have much lesser in depth knowledge than IWT on various aspects of welding covering processes, material, weld failures & inspection, joint design & fabrication of welded structures and quality control apart from necessary welding skill, suitable for job function as shop floor inspector, senior supervisor, instructor, and Welding Co-ordination in a shop with limited variation in parameters on process, material, joint design etc.
- **(IWP): International Welding Practitioner** is an experienced highly skilled welder in at least one process with approval qualification as per ISO 9606. He is able to read technical drawings and is well informed about production methods concerning welded products, including some training on visual and liquid penetration examination. He can supervise & instruct industrial workers and assist the responsible Welding Co-ordinator. He is suitable to hold the position of supervisor in a manufacturing industry or as an Instructor for welders in a training institute.

## 4 International Welding Coordinator: IWE, IWT, IWS, IWP (Curriculum)

The guideline covers the minimum requirement for education and training in terms of objectives, scope, expected results and the teaching hours to be devoted to achieving them. It is reviewed periodically by IAB Gr A to take into account changes to reflect "state of the art". Students having successfully completed this

course of education and appropriate examinations will be expected to be capable of applying technology required in welding engineering as covered by the guideline.

It is to be noted that the overall structure of the syllabus for all levels is similar, but some topics are not considered in all levels of qualification.

**The depth to which a topic is dealt is indicated by the number of hours allocated to it in the guideline. This will be reflected in the scope and depth of the examination**

*(Figures against the subject heads are minimum lesson hours)*

	Modules of Theoretical Education and Fundamental practical skills	Teaching Hours			
		IWE	IWT	IWS	IWP
1	Welding Process and Equipment - Mod 1	90	81	48	29
2	Materials and their behaviour during welding – Mod 2	115	96	56	23
3	Construction and Design – Mod 3	62	44	24	6
4	Fabrication, application engineering – Mod 4	114	81	54	28
5	Theoretical Subtotal (Part 1)	381	302	182	86
6	Fundamental Practical skills (Part 2)	60	60	60	60
	Recommended Minimum Total Lesson Hours	441	362	242	146

## 5. International Welding Co-Ordination Personnel (Routes to Qualification)

- **Standard Route:** Involves study at an Approved Training Body (ATB) as per full syllabus and followed by ANB conducted examination as per IAB Guideline. This is the route offering the most comprehensive manner in which the syllabus could be covered to meet all the requirements of IAB guideline. These could be a University, Technical College or part of a corporate body with separate training setup suitably isolated from its business operation & presently offered by Cornerstone Academy, Chennai
- **Alternate Route:** Involves reduced study at an ATB as per prior proved qualification and examination as above. This option is available for candidates fulfilling the Access qualification for the relevant level and having minimum 4 years relevant experience (less than required for Transition).
- **Transition Route:** Existing professionals in a country doing similar nature of work having requisite knowledge and experience have an attractive option of acquiring the International Diploma of choice by the Transition Route during a 3 year window which earlier closed in December 2010. **However we have recently received approval of the International Authorisation Board of IIW to continue to offer the facility up-to 03-01-2012 to candidates who fulfilled the eligibility criteria by 31<sup>st</sup> Dec 2010.** To avail of this, eligible candidates have to **register within 2011** and undergo a 5 day refresher course conducted by ANB-India followed by an objective test and interview. **Further details under 9 & 10**

## 6. Standard Route: Access Condition for Admission to ATB

**Standard Route:** Involves study at an Approved Training Body (ATB) as per full syllabus for IWE/IWT/IWS/IWP as applicable and followed by ANB conducted examination as per IAB Guideline. This is the route offering the most comprehensive manner in which the syllabus could be covered to meet all the requirements of IAB guideline. These could be a University, Technical College or part of a corporate body with separate training setup suitably isolated from its business operation.

For the current list of ATB the candidates are advised to refer to our Website <http://www.iiwindia.com> or contact us directly (Refer to ANB Contacts under 'International Qualifications' in the website.)

Diploma		Access Condition for Admission to ATB
1	Engineer (IWE)	<b>Option 1:</b> Degree in Engineering/AMIIW or equivalent professional qualification
2	Technologist (IWT)	<b>Option 1:</b> Diploma in Engineering with minimum 3 years study after Secondary Education
3	Specialist (IWS)	<b>Option 1:</b> Degree in physical Science (B Sc)+ 5 Years' experience in welding or Professional Technician Certificate with minimum 2 years study after Secondary Education with 2 years' experience in welding or an IWP Diploma
4	Practitioner (IWP)	<b>Option 1:</b> Class X pass+ recognised welder training+ Valid welder approval as per ISO 9606/EN 287 for plate or ASME Sec IX G / International Plate Welder in any process + 2 Years' Experience as a Welder.

**For Fees & Charges Payable by the Candidates for Standard Route please directly contact ATB**

M/s. Cornerstone Academy Private Limited, CHENNAI 600 096, [cornerstonewelding@gmail.com](mailto:cornerstonewelding@gmail.com), Ph:+91 44 2496 3717

## 7. Alternate Route: IWE/ IWT / IWS / IWP

**Alternate Route:** The candidate must have educational qualification conforming to the Access Condition as required for the 'Standard Route' as described in 6 above for the appropriate level along with relevant knowledge, training and experience. They must have minimum 4 years' experience in Industry at the Welding Engineer/Welding Technologist/Welding Specialist/Welding Practitioner level. The Route involves no regular study of the full curriculum at an ATB.

*The intending Candidate is required to apply in a Prescribed Application Form which is a detailed evaluation checklist and presentation of a Project and pass an extensive Professional Assessment Interview (PAI). When these conditions are fulfilled, the candidate will be allowed to appear for final examination covering Module 1, 2, 3, 4 & Oral Examination to be conducted by ANB India based on the full IAB curriculum. However a candidate may find it useful to attend a short refresher course before the final examination.*

### 7.1 Revised Fees & Charges Payable by the Candidates for Qualification by Alternate Route

Sl. No.	Description	Fees for Alternative Route ₹ (In Rupees)			
		IWE	IWT	IWS *	IWP *
1	Application Fee	2,000	2,000	Presently not being offered	
2	Registration Fee	3,000	3,000		
3	Professional Interview/Project Evaluation	10,000	8,000		
4	Final Examination of all Modules	10,000	10,000		
5	Issue of Diploma Certificate	5,000	5,000		
6	<b>TOTAL FEES PAYABLE</b>	<b>30,000</b>	<b>28,000</b>		

- IWE & IWT by Alternative route is now introduced from April 2011
- All Fees are to be paid by DD at Kolkata in favour of 'The Indian Institute of Welding-ANB'

## 8. International Welding Coordinator Examination

Candidates going through the Standard Route are required to pass Examinations conducted by ATB at various stages of the course after attending the recommended lesson hours. The intermediate examinations are mandatory and are the of the ATB/Educational responsibility Institutions/University to ensure that those entering the next stage have acquired required level of knowledge.

The final written and oral examination to assess student performance in all Modules, based on the approved curriculum and in accordance with the relevant IIW examination guideline and rules is conducted by ANB-India. This examination is mandatory for award of Diploma and is independent of any assessment procedure conducted by ATB

## 9. Transition Route: Eligibility Criteria for IWE, IWT, IWS, IWP

Diploma	Criteria for Transition attained as on 31-12-2010
1 Engineer (IWE)	<b>Option 1:</b> Degree in Engineering/AMIIW + M Tech/Ph.D. in Welding + 3 yrs.' Experience in job similar to that of Welding Engineer. <b>Option 2:</b> Degree in Engineering/AMIIW + 8 yrs.' experience out of which 5 yrs.' Experience in job similar to that of Welding Engineer.
2 Technologist (IWT)	<b>Option 1:</b> Diploma in Engineering with specialisation in Welding + 5 Years' work experience out of which 3 yrs.' Experience in job similar to that of Welding Technologist. <b>Option 2:</b> Diploma in Engineering/AMIIW + 8 Years' work experience out of which 3 yrs.' Experience in job similar to that of Welding Technologist.
3 Specialist (IWS)	<b>Option 1:</b> Professional Technician Certificate/IWP Diploma+ <i>Welders Training Course</i> + 3 yrs.' Experience in job similar to that of Welding Specialist. <b>Option 2:</b> Professional Technician Certificate/IWP Diploma+ 8 yrs.' experience out of which 3 yrs.' Experience in job similar to that of Welding Specialist.
4 Practitioner (IWP)	<b>Option 1:</b> Class X pass+ recognised welder training / IPW+ Valid welder approval as per ISO 9606 for plate or ASME Sec IX G + 8 Years' Experience of which 3 years as welding Foreman or similar to job of International Welding Practitioner <b>Option 2:</b> Class X pass+ IPW & Valid welder approval as per ISO 9606 for plate or ASME Sec IX G+ 12 Years' Experience of which 5 years as welding Foreman or similar to job of International Welding Practitioner

Transition Route is an 'once in a lifetime' opportunity for candidates, who are appropriately qualified and experienced, to obtain an IIW diploma. They need not attend lesson or any training at an ATB nor appear in the detailed Final examinations conducted by ANB, as required by the normal 'Standard Route'.

Based on their qualification, welding specific training and courses undergone and related work experience, candidates' who have acquired the knowledge level as per the relevant course syllabus and curriculum, may be able to obtain any one of the above qualifications of the International Institute of Welding as per Criteria for Transition for each level attained as on 31-12-2010.

## 10. Procedure for Enrolment, Registration for Transition Route

- ✓ Information Brochure & Application form are available for download from our Website at no cost.
- ✓ The applicant to submit application forms with CV's for courses desired with all the documents and application fees. It is recommended that all the candidates verify his/her eligibility for obtaining the diploma with his own qualification and experience against the minimum requirement for consideration by Transition arrangement.
- ✓ The Applications when received with the required Fees will be scrutinised by the Assessment Committee of ANB-India as to whether the applicants' qualification and experience conforms to the transition criteria required for the relevant diplomas and option applied for.
- ✓ Once the application is accepted the candidate is informed and is then required to register with requisite registration fees. Candidates are allotted a registration number and.
- ✓ Candidates are informed of refresher course time and location and full schedule. They are required to remit the refresher course fees.
- ✓ The candidates will have to undergo a 5 day refresher course followed by test and interview to be conducted by ANB-India at various centres
- ✓ Successful Candidates will be awarded the International Diploma in respect of the course completed by them after payment of the required Diploma Fees.
- ✓ All payments are to be made by Bankers Cheque/Draft in favour of 'The Indian Institute of Welding ANB' and payable at Kolkata

### 10.1 Fees & Charges Payable for Refresher Course for Transition Route in the Extended Period

Sl. No.	Description	Fees for Transition Route ₹ (In Rupees)			
		IWE	IWT	IWS	IWP
1	Application Fee	1,000	1,000	1,000	1,000
2	Registration Fee	2,000	2,000	2,000	2,000
3	Fees for 5 day refresher course	12,000	12,000	12,000	12,000
4	Fees for Examination, Viva Voce	12,000	10,000	5,000	4,000
4	Certificate Issue Charges	5,000	5,000	5,000	5,000
5	<b>TOTAL FEES PAYABLE</b>	<b>32,000</b>	<b>30,000</b>	<b>25,000</b>	<b>24,000</b>



**Head Office and Registered Office**

**The Indian Institute of Welding**

A member society of International Institute of Welding

Mayur Apartment,

3A Dr. U N Brahmachari Street

Kolkata 700017

Phone: +91 33 2281 3208, Fax: +91 33 2287 1359

E-Mail: [indianwelding@vsnl.net](mailto:indianwelding@vsnl.net)

IIW India Website <http://www.iwindia.com>



**The Indian Institute of Welding -ANB**

Authorised National Body of the International Institute of Welding in India

Centre for Welding Education

Reba Nibas, 2<sup>nd</sup> Floor, 8/19 Fern Road, Kolkata – 700 019, INDIA.

Phone: +91 33 2460 5622

E Mail: [anb@iwindia.com](mailto:anb@iwindia.com),