



## **DOCUMENT No. IICS-WI-15-10**

### **Requirements for the Certification of IICS 3.1A Associate Welding Inspector (Level 1) and IICS 3.1 Welding Inspector (Level 2) in accordance with the requirements of BS EN ISO 17637<sup>1</sup>:2011 and ASME Section V<sup>2</sup>:2017**

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Issued under the authority of the Governing Board for Certification  
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IICS is administered by TUV NORD (Malaysia) Sdn. Bhd.

## FOREWORD

The International Inspector Certification Scheme (IICS) is a comprehensive scheme which provides for the examination and certification of individuals seeking to demonstrate their knowledge and/or competence in their field of operation. The scope of IICS includes Welding Inspectors, Crane Inspectors, Corrosion engineers, Piping Engineers Plant Inspectors and other certification schemas.

IICS is managed by certification board of TUV Nord Malaysia Sdn. Bhd., which acts as the governing certification body, in keeping with the requirements of the industries served by the scheme.

The current document covers the Certification of IICS 3.1A Associate Welding Inspector (Level 1) and IICS 3.1 Welding Inspector (Level 2).

## CERTIFICATION CRITERIA

The sole criteria for certification are given in the document (and any subsequent amendments) and no other criteria will be applied. Certification is not conditional on the candidate applying for other services from TUV Nord Malaysia Sdn. Bhd., its parent, or any other groups or associations.

## 1 GENERAL

### 1.1. Scope

This document prescribes procedures by which personnel may be examined, and, if successful, certificated for the duties of Associate Welding Inspector (Level 1) or Welding Inspector (Level 2), as defined in Clause 1.2. The examinations are primarily intended for fusion welded steel construction (structures, piping, vessels and boiler etc.).

### 1.2. Responsibilities of personnel

Typical areas of work activity of personnel for whom IICS Welding Inspector certifications would be suitable are given below:

#### 1.2.1 IICS 3.1A Associate Welding Inspectors (Level 1)

Under the supervision of a Welding Inspector or Senior Welding Inspector:

- Application of codes and standards requirements
- Reviewing welder and welding procedure certificates
- Witnessing welder and welding procedure certification tests
- Parent material identification and verification against documentation and markings of correctness of parent material.
- Pre-weld inspection and verification that dimensions, fit-up and weld preparations are in accordance with the engineering drawings.
- Preheating verification that preheat, (where required) is in accordance with specified procedures.
- Welding consumables identification and verification of correctness of welding consumables (electrodes, filler wires, consumable inserts, gases, fluxes etc).
- In-process welding surveillance to verify compliance with specified procedure including any preheat, interpass temperature control and post heat requirements.
- Witnessing NDT
- Post weld visual inspection and dimensional check of completed weldment against specification requirements and drawings.
- Witnessing Hydro or pneumatic pressure/leak tests

### 1.2.2 IICS 3.1 Certified Welding Inspectors (Level 2)

Those given above plus:

- Supervision of Associate Welding Inspectors in the conduct of above mentioned activities.
- Verification that a welding procedures are available, have been approved as required by the appropriate authority and are being employed in production.
- Witnessing of welder and procedure approval tests  
Witnessing the preparation of test pieces and destructive tests, and verifying compliance with appropriate standards and specifications.
- Verification that adequate and valid welder approvals are available, and that only approved welders as required are used in production.
- Verification that post weld heat treatment has been conducted in accordance with specification requirements.
- Preparation of inspection reports

## 1.3 Qualification Requirements for IICS Certification

Job responsibilities and experience criteria for examination eligibility as given below are strictly adhered to and enforced.

### 1.3.1 IICS 3.1A Associate Welding Inspector (Level 1)

Candidates	Welding Technology Related Experience	Remarks
<ul style="list-style-type: none"><li>• Fresh Graduates</li><li>• Welding Personnel</li><li>• Welding Inspection Personnel</li></ul>	None or Less than 2 years documented experience	Must attend an IICS approved training course

### 1.3.2 IICS 3.1 Welding Inspector (Level 2)

Candidates	Welding Technology Related Experience	Remarks
<ul style="list-style-type: none"><li>• Welder</li><li>• Welding Foreman/Supervisor</li><li>• QA/QC Personnel</li></ul>	Min 2 years documented experience (within recent 3 years)	Must attend an IICS approved training course
<ul style="list-style-type: none"><li>• Welding Inspector (AWS, CSWIP, PCN, etc)</li></ul>		Encouraged to attend an IICS approved training course, though not compulsory
<ul style="list-style-type: none"><li>• IICS 3.1A Certified Associate Welding Inspector (Level 1)</li></ul>		May request for an upgrade. Examination not required.

### 1.3.3 Health/Eyesight

- Recent Eyesight Test Certificate required, as proof of near visual acuity (based on Jaeger J1 Eye Chart or equivalent eye test)

## 2. EXAMINATION PROCEDURE

### 2.1 IICS Examination Format

The examination format for the IICS 3.1A. Associate Welding Inspector (Level 1) and IICS 3.1 Welding Inspector (Level 2) consists of written and practical examinations), which is designed to test the candidate's knowledge of the syllabus, and applicable codes and standards.

Please refer to Appendix 1 for details of the examination format.

### 2.2 Application for IICS Examination

Candidates will be required to submit an application form. All the information requested must be on these forms. No applications can be considered confirmed until receipt of correctly completed documents. Application forms ask for specific details of work experience and must be verified by current employer. Candidate must provide supervisor's contact information of previous employments or projects, which is meant for verification purposes by exam administrator.

In the event of a false statement being discovered on forms, any examination undertaken will be declared null and void.

Candidates proved to have cheated, or found to have attempted to remove or found to have removed examination material in an IICS examination will not be accepted as a candidate for any IICS examination for a minimum period of five years from the date of the examination where cheating, attempt to remove or removal of examination material, was established to have taken place.

Examination may be taken at any approved Test Centers. List is available on request.

## 3. CATEGORIES OF IICS CERTIFICATION AND FEES

Candidates may apply for one of the following certification categories:

Certification			IICS 3.1A		IICS 3.1	
Validity Term			3 years (RM)	3 years (USD)	3 years (RM)	3 years (USD)
Certification Fee per Candidate	Initial	IDC Participant	850	250	850	250
		Non-IDC Participant	1,600	400	1,600	400
	Retest		500	150	500	150
	Reschedule to another exam window stated by IICS		NIL			
	Reschedule to a preferred exam window		1,600	400	1,600	400
	Upgrade		500	150	NIL	
	3-year Renewal		NIL		500	150
	6-year Recertification		NIL		850	250

### **3.1 Initial Certification**

Refers to candidate's first attempt in taking the particular IICS Certification.

### **3.2 Retest**

Refers to candidate who fail in the initial certification. Candidate may attempt a maximum of two retests within 12-month period from the first scheduled examination date.

### **3.3 Upgrade**

Refers to IICS Level 1 Certificate holder who wishes to advance to IICS Level 2 Certification.

Candidate does not need to sit for an examination. Candidate must provide evidence in accordance with Clause 1.3.2. This can be satisfied by submitting a log sheet of relevant work activity covering the period of validity of the certificate.

### **3.4 Three-Year Renewal**

Refers to IICS Level 2 Certificate holder who needs to renew his/her certificate before its expiry.

Candidate does not need to sit for an examination. Candidate has to demonstrate that he/she has maintained his/her competence by providing evidence of continuous work activity in welding inspection. This can be satisfied by submitting a log sheet of relevant work activity covering minimum 2 years' documented experience within the recent 3 years.

The certificate will not be renewed without further test if a substantiated complaint is notified by the Governing Board during the period of its validity. Further instruction and retest may then be required.

### **3.5 Six-Year Recertification**

Refers to IICS Level 2 Certificate holder who needs to be recertified beyond six years from the initial examination (or 3 years from a previous three-year renewal).

Candidate has to demonstrate that he/she has maintained his/her competence by providing evidence of continuous work activity in welding inspection. This can be satisfied by submitting a log sheet of relevant work activity covering minimum 2 years' documented experience within the recent 3 years.

If qualify for 6-year recertification with the complete application, candidate will be required to take an online examination. The 6-year recertification online examination for Welding Inspector (Level 2) consists of 30 multiple choice questions.

Note: As a guide, 'reasonable continuity' in any given six year period means that absences from work for which the certificate was granted should not exceed one year in one or several periods.

## **4. IICS CERTIFICATION POLICIES**

### **4.1 Payment Policy**

- a) Applications will not be processed until payment is received and applied.
- b) Applicants are responsible for all taxes, banking or other service fees, including all applicable withholding taxes.
- c) Penalty fee of RM 150 will be imposed on application and payment received after the examination deadline.

## **4.2 Refund Policy**

- a) All refund requests must be submitted to the approved test center by e-mail within three (3) months from the date of payment.
- b) For refund requests made before the application deadline, you will be refunded the initial New Application fee minus RM 150 for processing.
- c) For refund requests made after the application deadline, you will be refunded 50% of the initial New Application fee.
- d) If you are found to be unqualified, you will be refunded the initial New Application fee minus RM 150 for processing.
- e) Reschedule application fees are non-refundable.
- f) Refunds will not be issued under the following circumstances:
  - If request is made three months or more after your initial payment date
  - If request is made less than five days before a scheduled exam appointment, or any time after a scheduled appointment
  - If you did not show up for your exam
  - If you have already taken your exam
- g) Refund requests have to come directly from the paying party, either the candidate or the organization that paid the examination fee (if not paid by candidate).

## **4.3 Examination Policies and Notifications**

- a) Examination Cycle
  - Each candidate is allowed 12 consecutive months to pass an examination.
  - This 12-month period begins with the first scheduled examination date.
- b) Retest
  - Candidate who does not pass the initial examination may attempt a maximum of 2 retests (on those parts of the examination in which success was not achieved) within the allowable 12-month period.
  - If candidate is unsuccessful within the allotted 12 months, he/she is required to re-take the full IICS approved training course, followed by a new application for the examination.
- c) Reschedule
  - If candidate cannot attend the examination as scheduled, he/she has to notify the approved testing center at least 2 weeks prior to examination date.
  - Reschedule fee of RM 150 apply and is non-refundable.
- d) Examination Results
  - Examination results will be emailed to candidate within 2-4 weeks after the examination date.
- e) Certificate of Proficiency and Certified Personal ID Card
  - A paper certificate and personal ID Card will be issued to the candidate who passed the examination.
  - The items will be mailed out to the candidate or the organization that paid the examination fee (if not paid by candidate), approximately 2-4 weeks from announcement date of examination results.
  - Penalty fee of RM 350 will be imposed on requests for reissuance of Certificate of Proficiency and/or Certified Personal ID Card.
- f) Term of Certification
  - Level 1 Certification is valid for three years.
  - Level 2 Certification is valid for three years.

- g) Renewal or Recertification
  - Renewal or Recertification of IICS Certificate must take place not later than 30 days after the date of expiry.
  - It is the certificate holder's responsibility to ensure that renewal takes place at the appropriate time.
  - Penalty fee of RM 150 will be imposed on renewal or recertification application received more than 30 days after the date of expiry.

#### **4.4 Grievances and Appeals**

- a) Appeals against failure to certify or against non-renewal of the certificate may be made by the inspector or the employer upon application in writing to the Governing Board.
- b) The contents of a failed exam will not be disclosed or returned to any candidate.
- c) An aggrieved party in a dispute which considers itself to have reasonable grounds for questioning the competency of an IICS qualified person may petition the Governing Board for non-renewal of the certificate. Such a petition must be accompanied by all relevant facts, and if in the opinion of the Board an adequate case has been presented, a full investigation of the circumstances under dispute will be initiated. If the petition is substantiated to the satisfaction of the Board, the certificate will not be renewed without further test.

### **5. RECORDS**

TUV NORD (Malaysia) Sdn. Bhd. maintains records of successful and unsuccessful candidates. These records are accessible to the Governing Board or its nominees at all reasonable times.

### **6. REFERENCES**

<sup>1</sup> BS EN ISO 17637:2011: Non-destructive testing of welds

-- Visual testing of fusion-welded joints

<sup>2</sup> ASME Section V, Edition 2015, Article 9 "Visual Examination"

### **7. ADDRESSES**

For further general information contact:

**TUV NORD (Malaysia) Sdn. Bhd.**

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Fax: +60 (3) 8023 4410  
Website: <http://www.tuv-nord.com/my>

For specific information on examinations and tests and arranging for them to be carried out, please contact the **approved Test Center(s)**:

**IDC Training House Sdn. Bhd.**

No 7, Unit 8, Jalan Industri PBP 3,  
Taman Industri Pusat Bandar Puchong,  
47100 Puchong,  
Selangor, MALAYSIA

Phone: +60 (3) 8061 5126 / 8061  
Email: [info@idc-training.com](mailto:info@idc-training.com)

Fax: +60 (3) 8068 7720  
Website: [www.idc-training.com](http://www.idc-training.com)



## **Examination Format for the Certification of IICS 3.1A Associate Welding Inspector (Level 1) and IICS 3.1 Welding Inspector (Level 2)**

**APPENDIX TO DOCUMENT NO. IICS-WI-15-10**

Appendix 1: Examination Format for IICS 3.1A and 3.1 Welding Inspectors



## APPENDIX 1: EXAMINATION FORMAT & TIMING

### 1. IICS 3.1A Associate Welding Inspector (Level 1) and IICS 3.1 Welding Inspector (Level 2)

Examination Format	Time Allowed	Details
<b>Theoretical Part A (Open Book)</b>	2 hours	30 multiple choice questions Ability to work with the applicable codes and standards: <ul style="list-style-type: none"> <li>• AWS D1.1: 2015, Structural Welding Code</li> <li>• ASME Boiler &amp; Pressure Vessel Code               <ul style="list-style-type: none"> <li>○ ASME IX: 2017 Welding Qualifications (Part QW)</li> <li>○ ASME V: 2017, Nondestructive Examination, Article 9</li> <li>○ ASME Sec. VIII Div. 1: 2017, Rules for Construction of Pressure Vessels (UG, UW, UCS, Mandatory appendix 4)</li> <li>○ ASME B31.3: 2016 Process Piping, Chapter V &amp; VI</li> </ul> </li> <li>• API 577 Welding Inspection and Metallurgy Code, 2013</li> </ul>
<b>Theoretical Part B (Closed Book)</b>	2 hours 30 minutes	100 multiple choice questions <ul style="list-style-type: none"> <li>• General &amp; specific Welding Theory, Welding Metallurgy, Welding processes, Welding discontinuities, Product Technology, NDT, Welding QA/QC, Welding symbols</li> </ul>
<b>Practical Part A1 &amp; A2</b>	1 hour 15 minutes	Time Allowed: 45 minutes <ul style="list-style-type: none"> <li>• Review of a welding procedure (WPS/PQR) in accordance to ASME IX - SMAW, GTAW, FCAW or GTAW processes</li> </ul> Time Allowed: 30 minutes <ul style="list-style-type: none"> <li>• Completion of a welder certificate (WPQ) in accordance to ASME IX - SMAW, GTAW, FCAW or GTAW processes</li> </ul>
<b>Practical Part B</b>	2 hours	Time Allowed: 45 minutes <ul style="list-style-type: none"> <li>• Visual Inspection of a plate butt weld for compliance to a code provided by the Test Center</li> </ul> Time Allowed: 45 minutes <ul style="list-style-type: none"> <li>• Visual Inspection of a pipe butt weld (not fractured) for compliance to a code provided by the Test Center</li> </ul> Time Allowed: 30 minutes <ul style="list-style-type: none"> <li>• Visual Inspection of a set of destructive test samples (one macro, bend or fractured fillets) for a welder or procedure approval test, intended to comply to a code provided by the Test Center</li> </ul>

**Pass mark for each individual part (Theoretical Parts A & B, Practical Parts A1, A2 & B) must be minimum 70%.**

**If the individual passing mark couldn't get achieved, the individual part, which has been failed shall be retaken.**

## 2. Examination Timing

### Group 1

8.30 am – 10.30 am	Open book examination
10.45 am – 12.00 pm	WPS, PQR & WQT
12.00 pm – 1.00 pm	Lunch break
13.00 pm – 3.30 pm	Closed book examination
3.30 pm – 5.30 pm	Practical examination

### Group 2

8.30 am – 10.30 am	Open book examination
10.30 am – 12.30 pm	Practical examination
12.30 pm – 1.30 pm	Lunch break
1.30 pm – 2.45 pm	WPS, PQR & WQT
3.00 pm – 5.30 pm	Closed book examination

### Group 3

8.30 am – 9.45 am	WPS, PQR & WQT
10.00 pm – 12.00 pm	Open book examination
12.00 pm – 1.00 pm	Lunch break
1.00 am – 3.00 pm	Practical examination
3.00 pm – 5.30 pm	Closed book examination