



*The World Organisation for NDT*

## **Global Harmonisation and the 'Golden Standard'**

Presented by Colin Bird – ICEC Secretary

as part of the 13<sup>th</sup> European Conference on Non-Destructive Testing (ECNDT)

held in Lisbon (Portugal) from 3<sup>rd</sup> to 7<sup>th</sup> of July 2023

Co-compiler: Harold Jansen ICEC Chair

# International Harmonisation

Four pillars of international harmonisation relies on the following to be same / similar / equivalent:

*'same competence regardless of where (in the world) training / qualification / certification was conducted or maintained'*

- **Core content** ISO/TS 25107:2019  
Syllabus incorporates ANSI/ASNT CP 105 if ASME are included
- **Training** ISO/TS 25108:2018  
Training Organisations & training processes
- **Qualification** ISO/IEC 17024:2012 under scope of ISO 9712:2021  
Qualification bodies & examination processes  
*'what an individual must do to prove and sustain competence'*
- **Certification** ISO/IEC 17024:2012 under scope of ISO 9712:2021  
Certification bodies & certification processes  
*'what a third party must do to confirm & sustain competence'*

# ICNDT Certification Executive Committee (ICEC)

The ICEC is constituted under ***OP 18: ICNDT Certification Executive Committee***; and focuses on both qualification and certification as per the relevant Operating procedures assigned under the ICEC responsibility:

- ***OP 19: ICNDT Multilateral Recognition Agreement***
- ***OP 20: Personnel Certification Body Conformity Assessment***
- ***OP 23: Management of the ICNDT Examination Question Bank (EQB)***

(Refer to ***OP 13: Use of ICNDT Logo*** for reference to the use of relevant logos)

# MRA Schedule 1 Membership

The organizations listed below have signed the ICNDT Multilateral Agreement on Recognition of NDT Personnel Certification and have thereby agreed to:

- commit to the pursuance of the objectives of the MRA (i.e. harmonization);
- promote the recognition and acceptance of the certification issued by PCBs registered under the MRA (see Schedule 2);
- assist other interested parties by giving a clear overview of the NDT personnel certification activities in its own country;
- provide other parties with non-confidential information on the certification scheme(s) operated by PCB registered under this Agreement, and
- consult with and seek membership of the scheme and technical committees of NDT PCBs in its own country.
- indemnify ICNDT against liability for the party's use or misuse of this MRA.

# MRA Schedule 1 Membership (46 Organisations)

Country	ICNDT Member	Country	ICNDT Member
Argentina	AAENDE	Lebanon (Suspended)	Industrial Research Institute, Lebanon (Awaiting Confirmation)
Australia	AINDT	Malaysia	MSNT
Austria	ÖGfZP	Mexico	IMENDE
Belgium	BANT	Morocco	COMEND
Brazil	ABENDI	Netherlands	KINT
Bulgaria	BGSNDT	New Zealand	NZNDT
Canada	CINDE	Poland	Polish Society for NDT and Technical Diagnostics
China, Peoples Republic of China	ChSNDT	Portugal	Forum END
Chinese Taiwan	The Society for Nondestructive Testing and Certification of Taiwan	Romania	ARoEnd
Colombia	ACOSEND	Russia	Russian Society for NDT and Technical Diagnostics
Croatia	CrSNDT	Serbia	SDIBR
Czech Republic	Cndt)	Singapore	NDTSS
Denmark	Danish Society of NDT	Slovakia	SSNDT
Finland	Finnish NDT Society	South Africa	SAINT
France	Cofrend	South Africa	SAIW
Germany	DGZfP	South Korea	KSNT
Greece	HSNT	Spain	AEND
Hungary	MAROVISZ	Sri Lanka	NCNDT
India	ISNT	Switzerland	SGZP / SSNT)
Iran	IRNDT	Turkey	TURK NDT
Israel	ISRANDT	Ukraine	USNDT
Italy	AIPnD	United Kingdom	BINDT
Japan	JSNDI	Uzbekistan	UzSNDT
Kazakhstan	Non-Destructive Testing and Technical Diagnostic Association - Kazakhstan		



The organisations listed below have signed the ICNDT Multilateral Agreement on Recognition of NDT Personnel Certification and have thereby agreed to: • commit to the pursuance of the objectives of the

## MRA Schedule 2 Membership

NDT Personnel Certification Bodies (PCBs) have satisfied all of the eligibility criteria for registration under the ICNDT Multilateral Recognition Agreement (MRA) for PCBs, including having undertaken to abide by the ICNDT Code of Practice, and has been nominated and accepted for registration within the terms of the Agreement signed by those Members of the International Committee for NDT (ICNDT) listed in Schedule 1 to the Agreement.

These Personnel Certification Bodies may therefore announce that holders of their certificates issued under these arrangements are certificated by a PCB which is registered by the ICNDT as meeting the requirements of the applicable Standards (ISO/IEC 17024 under scope of ISO 9712) and Technical Documents referenced in the schedule of conformity (scope) issued by the accreditor (**OP 19**) and/or the ICNDT (**OP 20**).

All signatories to the Agreement, and all PCBs registered under the Agreement, are bound to promote the recognition and acceptance of the certificates issued by all other ICNDT Registered NDT Personnel Certification Bodies.

## MRA Schedule 2 Membership (21 Organisations)

NDT PCB	
Argentinian Institute for Standards and Certification - IRAM	PCN – British Institute of NDT (UK)
Associação Brasileira de Ensaios Não Destrutivos e Inspeção (ABENDI)	RELACRE - Associação de Laboratórios Acreditados de Portugal
Australian Institute for Non-destructive Testing (AINDT)	RTC "Testing and diagnostics" (Moscow, Russian Federation)
Chinese Society for Non-Destructive Testing (ChSNDT)	SAIW Certification (South Africa)
Department of Skills Development, Ministry of Human Resources, Malaysia	SECTOR Cert - Gesellschaft für Zertifizierung GmbH, (Germany)
Inspecta Sertifointi Oy (Finland)	The society for Non Destructive Testing and Certification of Taiwan
Korean Society for Nondestructive Testing KPCN-KSNT	TÜV NORD Czech, s.r.o.
National Certification Board of Indian Society for Non-Destructive Testing NCB - ISNDT	TWI Certification Ltd (UK)
Mexican Institute for NDT (IMENDE), Mexico	The Ukrainian Scientific Research Institute for NDT (UkrSRINDT)
National Certification Body for Non-Destructive Testing, Sri Lanka	Urząd Dozoru Technicznego Jednostka Certyfikująca Osoby UDT-CERT (Poland)
Non-Destructive Testing Society (Singapore) - NDTSS	

## MRA Schedule 2 - Current Requirements

- Proposed for registration under Schedule 2 by a Party to this MRA that is a signatory to Schedule 1 (different entities); •
- Accept the ICNDT Code of Practice for Personnel Certification Bodies.
- Identify Authorized Qualification Bodies used and sectorial arrangements with a published code of ethics
- Shall be independently accredited
- Evidence that the accreditation meets ICNDT requirements
- Payment of relevant fee
- Annual surveillance and re-registration as per 3-year registration cycle.



## MRA Schedule 2 – Motivation

Since both ISO/IEC 17024 as well as ISO 9712 stipulates **minimum** requirements to be met by qualification processes and certification bodies; a 'golden standard' has been proposed which potentially clarifies areas open to interpretation, in order to improve harmonization and to address matters relating to:

- Impartiality;
- Conflicting interest / perception ;
- Traceability and
- Technical aspects

specifically related to qualification and certification of NDT personnel as per the referenced standards in the initial slide.

# MRA Schedule 2 – ‘Golden’ Standard

## Impartiality

- Separate legal entities between training organizations and certification bodies
- Separate board responsibilities
- Impartiality committee terms of reference extended to include training and decision making;

## Perceived conflict of interest

- Shared public platforms
- Constitution of Scheme committees

## Traceability

- Accreditation bodies signatories to IAF MLA Scope 2 Certification of Persons as per ISO/IEC 17024 (scope 3)

# MRA Schedule 2 – ‘Golden’ Standard

## Technical aspects

- NDT Lev 3 Technical Expert to be part of audit team – auditors do not necessarily have NDT expertise in relation to technical content, practical competence or resources utilized as part of NDT activities.
- Confirmation from NDT Lev 3’s forming part of Scheme Committee / Qualification body (Exam panels) that technical content as per method for which they are certified; complies with technical content stipulated in ISO/TS 25017 (incorporating ANSI/ASNT CP 105 if ASME is applicable) and relevant sector standards.
- Classification of anticipated training objectives and outcomes into levels of complexity and specificity as per Bloom’s Taxonomy
- Defined / guided sector specific industrial experience requirements
- Training organizations formally recognized as per ISO/TS 25108

# ICEC Examination Question Bank (EQB)

The qualification process, which relies mostly on the examination of personnel; requires standardization of questions to allow for global harmonization in relation to theoretical and sector specific knowledge.

The delivery model of the existing EQB is in the process of being digitized allowing MRA Scheduled 2 registered PCB's (focusing currently on small to medium PCB's) to utilize this on-line platform for General and Specific examinations in the six basic NDT methods at all three qualification levels.

The digital platform allows for the EQB to be updated and aligned to the latest version of ISO/TS 25107 as well as related ISO standards with the potential of expanding into regional EN and national standards.

While the delivery language is English (Spanish to be added separately) accommodating various major international languages are very much in the concept phase but are being considered via add-on applications.

## ICEC Examination Question Bank (EQB)

---

You are encouraged to take part in the 'sand box' trial of the EQB by accessing the following link and to provide comments to the ICEC in relation to your experience:



**(Please note that questions included in the sandbox have been created to facilitate the initial phase and does not form part of the actual database questions)**