

The Official Journal of the  
**International Committee for Non-Destructive Testing**

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# HIGHLIGHTS



## ASME ANNOUNCE THE ACCEPTANCE OF ISO 9712/EN 473

The new wording in the Article 1 of Section V of the ASME Boiler and Pressure Vessel Code will be as the following:

“National and international central certification programs, such as the ASNT Central Certification Program (ACCP), may be alternatively used to fulfill the examination requirements in T-120 (e) as specified in the employer’s written practice.”

The revision will be published on July 1, 2003 in the 2003 Addenda

## The world Organisation for NDT

# GREAT OPPORTUNITIES FOR NDT PEOPLE!

The forthcoming 3<sup>rd</sup> Pan American Conference on NDT to be held in Rio de Janeiro, Brazil, next 2-6 June, and the 11<sup>th</sup> Asia-Pacific Conference scheduled in November 3-7 in Jeju Island, Korea are the greatest NDT events of year 2003. Don't miss such appointments !

### 3<sup>rd</sup> PAN AMERICAN CONFERENCE ON NDT - PANNDT Rio de Janeiro, 2-6 June 2003

111 Pan-American Conference for Nondestructive Testing Rio de Janeiro

RIO - BRAZIL

**Palavra Do Presidente (Word of President)**  
 Estamos na contagem regressiva para consolidar a realização da 3ª Conferência Pan-americana de END, marcada para os dias 02 e 06 de junho próximo, na cidade do Rio de Janeiro, desafio que a Associação Brasileira de Ensaios Não Destrutivos - ABENDE, aceitou em 1998, quando o Brasil foi escolhido, pela primeira vez, entre todos os países da América Latina para sediar o evento. Nesses últimos anos, temos somado os esforços com os nossos associados e, em especial, com a AGFA, Confab, Kodak, MCT, Metal-Check, PQU, Petrobrás, Pasa e Usiminas empresas patrocinadoras, no sentido de reunir o maior número possível de técnicos, profissionais e acadêmicos que atuam no mercado de END. Uma das ações do Comitê Pan-americano de END foi viajar para diversas partes do mundo para divulgar a Conferência - cujo tema central é “A alta tecnologia com confiabilidade na inspeção e segurança e respeito ao meio ambiente”, e estimular a vinda de outros países, meta que se cumpriu com a inscrição de 70 trabalhos técnicos do Exterior. Sabemos que esse evento em muito poderá contribuir para fortalecer a imagem do país e, portanto, estamos cuidando de todos os detalhes para que o visitante sintam-se recompensado. A 3ª Conferência Pan-americana de END compreende: sessões especiais, palestras e conferências em seu programa técnico, com a presença de especialistas internacionais; uma exposição técnica de equipamentos, produtos e serviços de END; o seminário do Grupo Latino-americano de Emissão Acústica e o um workshop que discutirá a “Harmonização Internacional em Treinamento e Certificação de Pessoal em END”.

**Maria Izabel Laczko Gebrael**  
 Presidente do Comitê Pan-Americano de END



### 11th APCNDT welcoming message

Dear Friends and Colleagues,  
 It is my pleasure to invite you to the 11th Asia-Pacific Conference on Nondestructive Testing (APCNDT) to be held in Jeju, Korea on November 3 - 7, 2003. For many years nondestructive testing (NDT) has become an increasingly important aid in a whole range of industries, and been responsible for the safety and reliability of structures and products. NDT has also provided very vital tools in the effective performance of research, development, and design and manufacturing processes not only in the traditional industries but also the newly emerging industries. Only with the appropriate use of NDT techniques can the benefits of advanced materials science be fully achieved. The 11th APCNDT will explore and discuss ways and techniques to further the advancement of this technology to work toward improved quality management and process monitoring systems over a wider range of industrial applications. The conference will serve as a platform for exchanging knowledges, experiences, views about the ever growing role that NDT can play in the development of the emerging industries such as the environmental, bio, and nano technologies. I extend a cordial invitation to every one of you to be an important part of this conference, which will take place in the Jeju Island, one of the most exotic places in the Orient, with a rich cultural heritage and rare natural beauty. We will do everything to make your experience at the 11th APCNDT most rewarding, enriching and memorable. The 11th APCNDT is for us all. All the committees have had the privilege of laying a foundation for an informative and enjoyable meeting. And, your presence is just the key to turn it into reality. I look forward to seeing you in Jeju, Korea.

*Sekyung Lee*

**Sekyung Lee, Ph.D.**  
 Chairman, -Organizing Committee of 11th APCNDT



### COMMENT BY B. RAJ, CHAIRMAN OF PGP

Dear Mr. Nardoni  
 It is wonderful to hear from you the success with ASME. We are all together to work and achieve harmonization of certification internationally and acceptance of ISO 9712/EN 473 standard internationally. The next step would be education, tapping frontline research for industry, eminent journal and sustaining excellence by rewarding the best among the professionals. God bless you and all associated with ICNDT.

**Baldev Raj**

**Barcelona, June 2002.** A relevant recommended guidelines for qualification and certification of NDT personnel based on ISO 9712 has been presented in draft form by ICNDT.

From 1995 **ICNDT** "the world organization for NDT"  
 INTERNATIONAL COMMITTEE FOR NON DESTRUCTIVE TESTING

**"a challenge for safety"**

**ICNDT RECOMMENDED GUIDELINES FOR QUALIFICATION AND CERTIFICATION OF NDT PERSONNEL ACCORDING TO ISO 9712**

Draft 2002

## THE ICNDT FLAG AROUND THE WORLD



### THE 28th ICNDT MEETING Barcelona, Spain 20 June 2002

#### Report from Barcelona 2002



### ICNDT EXECUTIVE MEETING Chennai, India, 6 December 2002



# 2002 Events



ICNDT Honorary Member Mr Kopinek and his wife with the ICNDT flag given to him by Mr. Link and Mr. Nardoni.



Toast of ICNDT President with Mr Harper, President of BINDT during the Annual Conference



M. Farley and G. Aufricht going to IAEA in Vienna to discuss ICNDT collaboration for the incoming NDT programs



Mr Thompson receive a special honour plaque for his contribution to ISRANT Conference

## The 8<sup>th</sup> European Conference on NDT

*The most important event of the year has been held in Barcelona last June.*

More than 2000 persons, including 788 registered attendees, 401 exhibitor's staff officially accredited and more than 1000 visitors of exhibition made the 8th ECNDT a very successful NDT event. The exhibition was enriched by 104 booths, including 90 NDT companies and 14 National NDT Societies from Europe and overseas. The technical programme included 400 papers by authors coming from 45 world wide countries; the presence of 67 papers by authors from 13 countries outside of Europe geographic area, underlined the international feature of this Conference.

Several important meetings were also held in conjunction with the Conference, namely: the 28th Meeting of ICNDT, the Meeting of Board of Director of EFNDT, the PGP Meeting, the ICNDT Seminar on ISO 9712, the presentation of ICNDT Recommended Guidelines for Qualification and certification of NDT personnel according to ISO 9712, the presentation of the adopted EFNDT flag.



AEA Technology – CBI Technicians take a break after a training course on austenitic steel



September 2002 - BINDT Board of Directors discussed active co-operation with ICNDT.



The opening



The guitars, expression of Spanish music, made cheerful the opening.



The conference hall



EFNDT Board of Directors



Mr Murphy (left) has presented the ISO 9712 Certification Procedure at the special session of NDT. (Vancouver 2002)



The new EFNDT flag



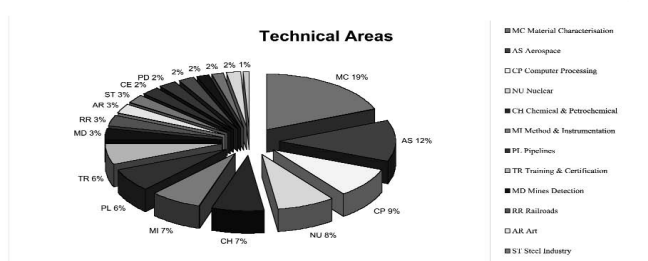
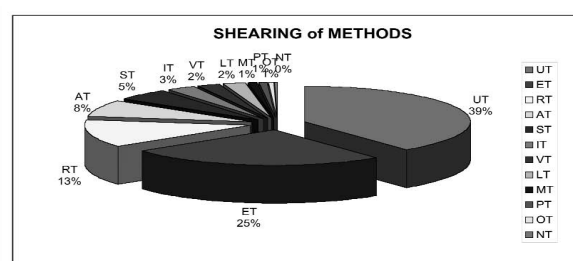
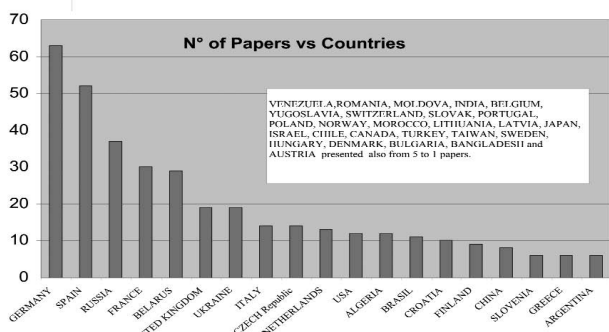
ICNDT meeting



The ASME secretariat staff is looking the ASME news published on ICNDT Journal (Vancouver 2002)

**FEATURES OF TECHNICAL PAPERS PRESENTED AT THE 8th ECNDT**  
400 papers by authors coming from 45 world-wide countries were presented at the 8th ECNDT, held among that Material Characterization (19%), Aerospace (12%), Computer Processing (9%), Nuclear being the most faced sectors. Ultrasonic (39%) was the most adopted method, followed by Electri

**Papers covered 19 different technical areas**  
cal (7%), Methods and Instrumentation (7%) (13%) and Acoustics (8%).





## TRENDS IN THE CERTIFICATION AND THE QUALIFICATION OF NDT PERSONNEL ACCORDING TO ISO 9712

Dr. R.V. Murphy – Natural Resources Canada (NDT Certifying Body), Ottawa, ON, Canada - ISO Representative in ICNDT

Nondestructive testing plays a fundamental role in diagnosis and evaluation of the continued fitness for service of engineered structures. For example: the failure of aircraft landing gear, an oil/gas pipeline, a nuclear pressure vessel, etc. would have serious consequences. NDT is the primary non-invasive assessment tool used to reduce the risk of failures of engineered components, failures that could result in loss of life, deterioration of health or destruction of the environment. It logically follows that persons who perform these safety-critical inspections be competent.

How can we ensure the competency of the NDT inspectors? Competence can be assessed through a process of qualification in which the inspector demonstrates that he/she meets certain minimum requirements for education, training and experience and successfully passes written and practical examinations. Since the early 1960's we have witnessed the development of qualification processes that were administered either by the employer (2nd party qualification) or by an independent body (3rd party certification). NDT techniques are evolving - becoming more complex and the knowledge required of the inspector is similarly increasing. Industry standards and global trade are demanding a guarantee of more reliability in the assessment of NDT inspectors.

How can we ensure more reliability in the assessment of NDT inspectors? Ideally, we would like every inspector to be assessed the same way. It logically follows that we need a global standard that defines a set of common assessment criteria such as training, experience and examinations. It also follows that we can increase assessment reliability by reducing the number of assessors. Thus, today we witness the powerful drive toward the goal of one global NDT standard to be implemented in the same way in each country by one National certifying body.

**More Reliability in Assessment**

How to guarantee reliability in assessment of inspectors?  
Ideal: every inspector to be assessed the same way.

- one global NDT standard: one set of common assessment criteria for education, training, experience and examinations
- common training curricula, assessment of training organizations
- similar number and type of specimens for practical examinations
- reduce the number of assessors: 1 certifying body / country
- assess the assessors (accreditation - EN 45013 / ISO 17024)

Today there is powerful drive toward the goal of one global NDT standard to be implemented in the same way in each country by one accredited National certifying body.

CANMET Materials Technology Laboratory  
Laboratoire de la technologie des matériaux  
Canada

This global effort began in 1985 when the International Committee for Non-destructive Testing (ICNDT) established minimum requirements for several NDT methods and provided this information to the International Organization for Standardization (ISO). In 1992, the first version of ISO 9712 (ISO 9712:1992), "Non-destructive testing - Qualification and certification of personnel" was published as a reference to the certification process. The basic change of ISO 9712 from

most other schemes was that the assessment of competency was to be made by a third party, independent of the employer. A secondary change was the requirement for the certifying body to comply with the provisions of European Standard EN 45013:1989, "General criteria for certification bodies operating certification of personnel" that required the certifying body to have a certain administrative and organizational structure, a quality manual and document-control system.

ISO 9712:1992 allowed certifying bodies up to 15 years to fully comply with all the provisions of the Standard. However, member countries of the European Union required more immediate standardization/compliance. Thus in 1993, the European Committee for Standardization (CEN: Comité Européen de Normalisation) revised the ISO standard and published the European Standard EN 473:1993, "Qualification and certification of NDT personnel - General principles". During the 7 years after publication of ISO 9712:1992, many countries introduced or modified their existing NDT certification schemes to be in full compliance or to align with the provisions of ISO 9712. Examples include: USA (ASNT/ACCP), Canada, Japan, Australia, etc. In twenty-two European countries, the plethora of existing certification bodies operating under different industrial norms were eliminated and generally replaced by one central certifying body per country. These twenty odd European certifying bodies formed a federation, the European Federation for Non-destructive Testing (EFNDT). Membership in EFNDT is open to national certifying bodies who are accredited under European Standard EN 45013 to implement EN 473.

Certain provisions of ISO 9712:1992 were found to be less than optimum and revision of the International Standard began in 1995 culminating with the publication in May 1999 of the second edition, ISO 9712:1999, "Non-destructive testing - Qualification and certification of personnel". This was followed shortly with the publication in October 2000 of the second edition of the European Standard EN 473:2000, "Non-destructive testing - Qualification and certification of NDT personnel - General principles". These two standards were/are 95% the same, but still different.

**Drivers in Global Harmonization**

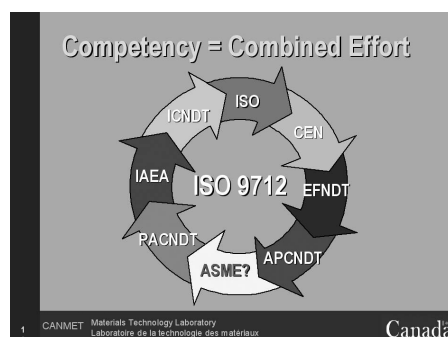
ICNDT: International Committee for Non-destructive Testing  
ISO: International Organization for Standardization  
CEN: European Committee for Standardization  
EFNDT: European Federation for Non-destructive Testing  
APCNDT: Asia-Pacific Committee on NDT  
PACNDT: Pan-American Committee on NDT  
IAEA: International Atomic Energy Agency

CANMET Materials Technology Laboratory  
Laboratoire de la technologie des matériaux  
Canada

In October 1999, at an ISO meeting in Vancouver Canada, industry representatives spoke of their frustration with having to pay for

certification/qualification under several similar but different NDT standards. It was decided that what was needed was one truly global NDT standard - a fusion of ISO 9712 and EN 473 with the best of other recognized NDT Standards (e.g. SNT-TC-1A). Thus work began on the third edition of ISO 9712 with very close cooperation between the members of ISO, CEN, EFNDT and ICNDT. The Draft International Standard (DIS ISO 9712) was released today (August 8, 2002) for a five-month vote by members of ISO Technical Committee 135, Subcommittee 7.

In October 2001 at the Asia-Pacific NDT Conference in Dacha Bangladesh, ICNDT and the International Atomic Energy Agency (IAEA) along with the Asia-Pacific Committee (APCNDT) promoted a Multilateral Recognition Agreement (MRA) based upon compliance with ISO 9712:1999. Ten countries (Australia, Bangladesh, India, Malaysia, Myanmar, New Zealand, Pakistan, Philippines, the Republic of Korea and Sri Lanka) signed this MRA. However, a need was identified for a guide to the development of a quality management system for use by the certifying bodies. The idea of having a single International NDT accreditor to replace accreditation by national accreditation bodies was also advanced.



In June 2002 in Barcelona Spain, during the 28th meeting of ICNDT, the representative of IAEA stated that the IAEA would promote and financially support the establishment in developing countries of only one NDT standard - ISO 9712. ICNDT announced official support in its strategic policy for ISO 9712 as primary reference for the certification of NDT personnel. ICNDT was charged with the responsibility to develop a simple guide to the establishment of a quality management system for certifying bodies. It was also noted that several countries, not just developing countries, have difficulty with accreditation by their national accreditation body. ICNDT was identified to be the logical choice to assume the role of International accreditor for all certifying bodies. This would ensure that all national certifying bodies would be assessed in exactly the same way and provide assurance that certified personnel were reliably assessed everywhere in the world. Such accreditation would be in accordance with the provisions of recently (2002) published standard ISO 17024, "General requirements for bodies op-

erating certification systems of persons", the replacement document for EN 45013:1989.

Also in Barcelona, at meetings of CEN and ISO, work packages were allocated for the establishment of standardized curriculum for each of the main NDT methods. This work will be followed by the revision of training hours specified within ISO 912. There will also be standardized criteria for assessment of training organizations implementing the new standardized curricula.

At the beginning of this paper, I posed the question, "How can we ensure the competency of the NDT inspectors?" I believe that through ISO 9712 and the combined efforts of the International Organization for Standardization (ISO), the European Committee for Standardization (CEN), the European Federation for Non-destructive Testing (EFNDT), the International Committee for Non-destructive Testing (ICNDT), the Pan-American Committee on NDT (PACNDT), the Asia-Pacific Committee on NDT (APCNDT) and International Atomic Energy Agency (IAEA), we are approaching true global harmonization of the NDT certification process. ISO 9712 will set the minimum requirements for education, training and experience and establish a commonality and equality of written examinations and practical examinations/test specimens. A common training curriculum for each NDT method and standardized criteria for assessment of the training organizations will assist this normalization. We are headed toward International accreditation by ICNDT of each National certifying body. In summary, we are building the key components of a global certification scheme that will ensure the competency of NDT inspectors throughout the world.



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# STATUS OF THIRD PARTY CERTIFICATION ACCORDING EN 473/ISO 9712 - EUROPE AND CANADA

## Status of NDT Personnel Certification in Europe: A survey among EFNDT members

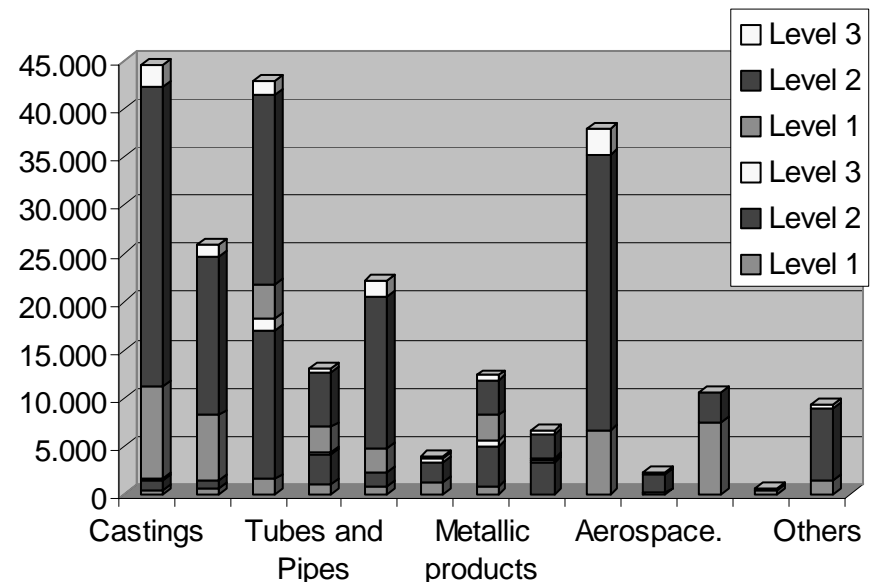
The survey was performed at the request of EFNDT BoD meeting held in Madrid in October 2001. Answers were received from 17 members, all of them performing certification in accordance with EN 473:

AEND Spain; AIPnD Italy; ARoEND Rumania; OgfZP Austria; BANT Belgium; BANK Belarus; BINDT United Kingdom ;Bulgarian Society for NDT Bulgaria; COFREND France; CrSNDT Croatia; CNDT Czech Republic; DGZfP Germany; KINT The Netherlands; MAROVISZ Hungary; RSNDT TD Russia; Serbian Society for NDT Serbia; SGZP Switzerland.

The first table gives the total number of valid certifications on 31/12/2001 per industrial sector (as far as possible, sectors have been labelled according to the definitions given in EN 473 Annex A).

The second table gives the number of certified operators per sector at the three levels.

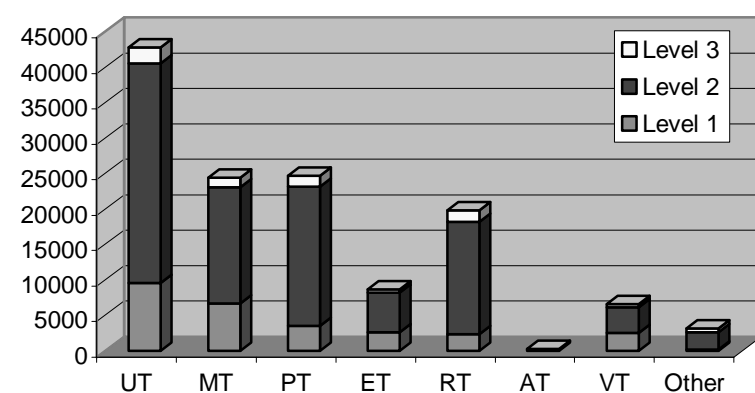
Total Number of Certified Operators vs Methods



## TOTAL NUMBER OF CERTIFIED OPERATORS AS PER 31/12/2001: 102.347

	Castings	Forgings	Welds	Tubes and Pipes	Wrought products	Metal manufac.	Metallic products	Pressure Vessel	Pre and In-Service Insp.	Aersp.	Railways	Shipbuild.	Others	TOTAL
Level 1	4 6 7 6 9 2	1.623	1.125	9 5 0	1.319	8 2 11 2 3	6.676	1 9 2	7.539	4 6 4	1.597	23.588		
Level 2	1.068	7 6 8	15.477	3.100	1.342	2.114	4.136	3.299	28.591	1.931	3.133	2 1 2	7.460	72.631
Level 3	1 3 6	1 1 0	1116	144	1 0 1	3 0 2	7 7 8	2 1 1	2.585	2 4 5	3 0 1	2 3 5	6.128	
TOTAL	1.671	1.570	18.216	4.369	2.393	3.735	5.735	3.633	37.852	2.368	10.702	6 8 8	9.415	102.347

Total Number of Certified Operators vs Methods



## TOTAL NUMBER OF VALID CERTIFICATIONS AS PER 31/12/2001: 130.523

LEVEL	METHODS	Castings (c)	Forgings (f)	Welds (w)	Tubes and Pipes (t)	Wrought products (wp)	Metal manufac.	Metallic products	Pressure Vessel	Pre and In-Service Insp.	Aersp.	Railways	Shipbuild.	Others	TOTAL
1	UT	248	502	1071	556	708	590	491	39	1174	89	3128	129	826	9551
	MT	48	145	33	166	143	602	251	28	2232	38	2500	13	473	6672
	PT	55	94	36	75	110	558	88	19	2098	48	34	10	310	3535
	ET	0	14	60	451	42	166	37	2	492	50	1073	0	235	2622
	RT	111	27	812	153	0	235	43	33	939	13	4	35	0	2405
	AT	0	0	0	0	0	2	0	0	44	0	0	0	0	46
	VT	68	0	30	63	14	545	76	16	183	14	1212	295	0	2516
	Other	0	0	0	0	0	14	0	2	214	0	0	0	0	250
TOTAL		530	782	2042	1464	1017	2712	986	139	7376	252	7951	482	1864	27597
2	UT	410	644	9681	1481	1084	769	2226	1964	5974	851	2081	58	3805	31028
	MT	137	139	721	444	156	999	1452	313	9523	523	44	29	1901	16381
	PT	224	135	627	316	154	1056	711	280	12772	903	1342	22	1136	19678
	ET	0	10	155	879	93	64	296	37	880	734	0	0	2462	5610
	RT	419	46	8393	821	0	535	354	419	4388	225	0	31	178	15809
	AT	0	0	0	0	0	8	0	0	146	0	0	0	0	154
	VT	64	0	73	264	18	409	112	961	1353	73	116	91	94	3628
	Other	0	0	1082	0	0	429	5	20	571	5	0	0	0	2373
TOTAL		1254	974	20732	4205	1505	4269	5156	3994	35607	3314	3583	231	9837	94661
3	UT	19	89	691	88	70	194	136	60	770	85	32	5	32	2271
	MT	15	38	62	23	30	160	89	36	787	130	0	2	0	1372
	PT	36	26	61	14	29	154	87	30	874	114	0	2	32	1459
	ET	0	5	18	40	16	37	28	11	200	79	0	0	0	434
	RT	97	17	527	47	0	120	71	43	620	66	0	4	32	1644
	AT	0	0	1	0	0	0	0	16	42	0	0	0	0	59
	VT	24	0	22	7	3	90	25	42	287	2	0	0	0	502
	Other	30	0	1	0	0	5	0	9	99	0	0	0	0	524
TOTAL		221	175	1383	219	148	760	436	247	3679	476	32	13	476	8265
Gran Total		2005	1931	24157	5888	2670	7741	6578	4380	46662	4042	11566	726	12177	130523

## CANADA

From the office of Dr. Richard Murphy, Manager NDT Certification

TOTAL CERTIFIED PERSONS 4.000

Natural Resources Canada (NRCan), a Ministry of the Federal Government of Canada, implemented third-party NDT certification in 1960 based upon a National Standard of Canada issued by the Canadian General Standards Board.

Currently, there are 4,000 certificated persons holding 10,500 NDT

certificates. The Canadian certification scheme is in accordance with the National Standard of Canada, CAN/CGSB-48.9712-2000 which is compliant with ISO 9712:1999 and EN 473:2000. NRCan's Certifying Agency has a permanent staff of eight: one manager, three administrators and four technical experts. The Certifying Agency has fifteen examinations centres, generally located in Technical Colleges, sited across Canada. Ten centres offer practical and written examinations and five centres offer only written examinations. Examinations are 'on-demand'; the candidate may schedule his/her examinations at any of the appropriate test centres at any convenient and available time. Each test centre possesses three different sets of examinations for each of the NDT methods. One set of examinations is changed each year so that all examinations are changed every three years.

A total of 664 test specimens are used in the practical examinations and these specimens are the property of and are controlled by Certifying Agency. Most specimens for magnetic particle and liquid penetrant examination contain real flaws; parts industry rejected as no longer fit for service. All examinations (written and practical) are invigilated at the test centers but are graded by Level 3 examiners at the Certifying Agency. The Certifying Agency is supported by a twelve member Advisory Body (50% Level 3's) to guide the implementation of the National certification scheme.



# GLOBALIZATION AND HARMONIZATION OF NDT PERSONNEL CERTIFICATION

by John Thompson (Shorted version - first part)

## SYNOPSIS

The subject embraced by the title of this paper is probably the most widely and intensely debated topic within the field of non-destructive testing. It is also a topic which has generated extreme passions, often divided into two camps – pro or anti 2nd party approval of NDT personnel.

It was the development by ASNT of the historic guideline, SNT-TC-1A, which first introduced a structured approach to training and 'approval' (it is no longer correct to refer to 'certification' in this context since, in ISO terminology, certification implies the involvement of a third party) of NDT personnel. However, being a guideline, TC-1A could never be prescriptive; companies implementing the guidance within could choose to do so on a total or piecemeal basis.

The International Committee for NDT (ICNDT), recognising the need for a standard, requested that ISO develop a 3rd party certification standard for NDT personnel and offered a number of ICNDT documents (ICN WH 85 : 1985 - 'The complete recommendations on international harmonisation of training, qualification and certification of NDT personnel') as a basis for the first ISO working draft.

There have been some fundamental developments in Europe over the past four years, resulting in the founding of a European Federation for NDT with almost thirty member NDT societies having shared ideals and aspirations.

The European Pressure Equipment Directive - 97/23/EC - was formally adopted by the European Parliament and Council on 29th May 1997. It entered into force on 29th November 1999 but compliance with its requirements will be optional until 29th May 2002. The purpose of the directive is to harmonise national laws regarding design, manufacture and conformity assessment of pressure equipment and assemblies (vessels, storage containers, heat exchangers, shell and water tube boilers, industrial pipework, safety devices and pressure accessories)

ASME Code requirements for NDT personnel have been revised following recent code case enquiries to reference ASNT ACCP certification. Further code case enquiries have been submitted to ASME during 2000 in which it is proposed that the various codes embody a wider acceptance of third party issued certificates of competence.

This paper will elaborate on all of the topics briefly covered in this summary.

## STANDARDS

As a consequence of the widespread misuse of the concepts detailed in SNT-TC-1A, there was a perceived need to develop a standard which prescribed requirements in such a way that these requirements could be specified by purchasers of tested goods or testing services, thus protecting the interests of those directly and indirectly benefiting from the non-destructive testing applied by certified competent personnel.

- ISO 9712 was developed at the request of the ICNDT by ISO Technical Committee 135 Sub Committee 7 (ISO/TC135/SC7) and issued in 1991 in order to provide an international standard which would have the effect of harmonizing the certification of NDT personnel throughout the world. ISO 9712 was the first international standard specifying independent (central) certification. The second edition of the standard was published early in 2000, and a third edition (intended to allow implementation of the Vienna Agreement [q.v.]) is already at an advanced WG draft stage.

- EN 473 was developed by a CEN Technical Committee (CEN/TC138) specifically for the European Union in order to provide a more stringent set of requirements than ISO 9712, which allowed, in its first edition, up to fifteen years for countries adopting the standard to implement all of its provisions. The second edition of this standard was published in October 2000.
- ISO 11484 was developed specifically to provide for the needs of the manufacturers of steel tubes (for pressure purposes) where testing is usually carried out using automated systems which, once set up, require minimal NDT skills to operate. It was not considered appropriate, by the ISO member representatives of the industry concerned, to apply the provisions of ISO 9712 to levels 1 and 2 personnel in this industry, but 11484 does cater for both 2nd and 3rd party certification.
- prEN 10256 was developed by the European Committee for Iron and Steel Standardization (ECISS) for similar reasons to those that led to the development of the international standard ISO 10256; the industry utilizes a high proportion of automated testing and the application of EN 473 would lead to over qualification of operators.
- EN 4179 was developed by the Association of European Aerospace Manufacturers (AECMA) to suit the particular needs of their industry, which were not felt to be adequately served by EN 473. This industry sector uses a range of sometimes very esoteric NDT techniques, often automated and computerised, which it was considered would be beyond the scope of independent certification examinations. Added to this, there was a need to harmonise the certification of personnel employed in the European aerospace industry with the requirements of MIL-STD-410 (now AIA-NAS-410) since this standard is often specified in contractual arrangements with US manufacturers.

## VIENNA AGREEMENT

ISO/TC135/SC7/WG6 is currently engaged in a second revision of ISO 9712 with a view to of harmonisation and a fusion with EN 473 perhaps under the Vienna Agreement.

It is expected that, following the next scheduled meeting of the WG, which is made up of ISO 'P' member representative experts consisting of more or less equal representation from European and non-European 'P' members, the final WG Draft will be approved for submission to SC7 for approval as a Committee Draft.

## ICNDT

The International Committee on NDT is today seeking to establish for itself a wider and more meaningful role in the international NDT community. Already, much good work has been done under the recent presidency of Mr G Nardoni (President of the Italian NDT Society), including a laudable project to help ride the world of land mines.

At the recent 15th World Conference on NDT in Rome, the ICNDT was presented a paper proposing that it consider adopting an international role as an Association of NDT Personnel Certification Bodies.

Such an association could act as a peer review group, agreeing specifications (for the use of the member certification bodies) which it is not possible to incorporate, for various reasons, within any standard at present. It will be interesting to see whether the international NDT community is at last ready to consider such a proposal.

## EFNDT

The European Federation for NDT (EFNDT) was formed in 1999 from the members of the previous European Council for NDT (ECNDT)

The purpose of the Federation is to promote all aspects of non-destructive testing including the technology, research, development application, training and information in all countries within the geographical area of Europe, according to the UN definitions and to initiate any actions likely to improve its quality and reliability. The EFNDT:

will contribute to the removal of technical barriers and act as spokesman for the non destructive testing community in Europe. To this end, it will encourage contacts and exchanges between European associations or groupings and will maintain relations with associations or groupings in other geographical regions, including other regional NDT Committees.

THE EUROPEAN PRESSURE EQUIPMENT DIRECTIVE (PED)

Within the Directive, Pressure Equipment is categorised at four levels (I to VI) according to degree of hazard: category III and IV equipment, with potentially the greatest hazard, will require conformity assessment by 'notified bodies' and 'recognised third party organisations'. The following extracts are relevant to this paper:

97/23/EC Article 13 clause 1: Members states shall notify the Commission and the other member states of the third party organizations which they have recognised for the purposes of the tasks referred to in Annex 1, sections 3.1.2 and 3.1.3.

97/23/EC Annex I clause 3.1.3: Non-Destructive Tests. For pressure equipment, non-destructive tests of permanent joints must be carried out by suitable qualified personnel. For pressure equipment in categories III and IV, the personnel must be approved by a third party organisation recognized by a member state pursuant to Article 13.

97/23/EC Annex IV: Criteria to be met when designating the notified bodies referred to in Article 12 and the recognised third party organizations referred to in Article 13. (attached hereto for reference).

prEN 13480 : part 5 - Inspection and testing - clause 8.4.3 (Personnel qualifications). Personnel performing tests shall be qualified and certified in accordance with EN 473 for the appropriate testing method (this requirement is repeated in clauses 8.5 to 8.9 which cover NDT methods VT, MT, PT, RT and UT).

prEN13445 part 5 - Inspection and testing - clause 2 (Normative references) includes reference to EN 473.

prEN13445 part 5 - Inspection and testing - clause 6.1.3.5.7 (Qualification of NDT personnel): NDT personnel shall be qualified and certified in accordance with EN 473 except for visual examination and leak testing (for which personnel shall be qualified but not certified). NDT personnel shall hold an appropriate certificate of competence at level 1, 2 or 3, as appropriate, which is delivered as described in tables H-1 and H-2 depending on the conformity assessment module (tables H-1 and H-2 state that for category III and IV equipment, qualification and certification of NDT personnel may be (is?) carried out by recognised third party organisation).paragraph (b)?

Dr John Thompson  
Manager, Certification Services Division,  
The British Institute of NDT  
Member, British Institute of NDT and ASNT

## AUSTRALIA

### AUSTRALIAN NDT CERTIFICATION RECEIVES INTERNATIONAL RECOGNITION

On the 7th of May 2002, the Australian Institute for Non-Destructive Testing (AINDT) was awarded JAS-ANZ accreditation as a certifying body to EN 45013. JAS-ANZ is the Joint Accreditation System of Australia and New Zealand. The accreditation process was carried out in accordance with JAS-ANZ Procedure 20 – General Requirements for Bodies Operating Certification of Personnel (Incorporating EN 45013 and JAS-ANZ Guidance to the application of EN45013).

Tony Craven Chief Executive of JAS-ANZ formally presented the Accreditation Schedule and Certificate in Brisbane to John Maccarone, AINDT Federal President, on the 28th June 2002.

The scope of Accreditation covers the following certification standards:

- ∑ AS 3998 – 1992 (ISO 9712) – Non-Destructive Testing – Qualification and Certification of Personnel – General Engineering, and
- ∑ ISO 9712-1999 (soon to be AS 3998 – 2002) - Non-Destructive Testing – Qualification and Certification of Personnel – General Engineering.

A primary objective of JAS-ANZ is to establish international links so that the certifications that are issued by an accredited certification body, such as AINDT, will be recognised in any other market. JAS-ANZ has given priority to achieving mutual recognition with existing accreditation bodies and establishing strong links with accreditation programmes, particularly in Asia, Europe and North America.

This effectively means that AINDT certification issued to ISO 9712 under the JAS-ANZ accreditation would be deemed equivalent to other internationally accepted NDT certification programmes. This is a significant achievement for the AINDT certification system and should help with the promotion of trade for Australian producers and exporters.

AINDT will now work with JAS-ANZ to market this significant achievement for the Australian NDT Industry to ensure the full potential of mutual recognition in international markets is realised.



John Maccarone  
AINDT Federal President

## ITALY

The 10th Italian Conference on NDT was held from 2 to 4 last April in Ravenna organised by the Italian Society for NDT (AIPnD).

Despite of the national character of the conference many international events were included in the technical program. Plenary lectures were held as the following:

- Advanced Ultrasonic Probes by Boro Djordjevic (USA);
  - ASME in the Global Pressure Equipment Arena by Don Bray (USA);
  - Federal Aviation Administration Nondestructive Evaluation Research and Development Efforts by Alfred Broz (USA) and
  - NDT- Strategy for Humanitarian Demining by Vjera Krstelj (Croatia)
- In addition a number of open panel discussions were held on the following topics:
- "Certification of NDT personnel in Italy, Europe and in the world" with the participation of Mr. Murphy Chairman of ISO TC 135.
  - "Application problems of European Directive PED"
  - "Trend in NDT Technology and Certification of Personnel in Aerospace" with the participation of Mr Broz from FAA.
  - NDT for pressure equipment with ASME stamp " with the participation of Mr Sullivan and Mr Bray from ASME.



During the last listed panel relevant discussion took place about NDT personnel performing examination of pressure equipment with ASME stamp. It was underlined that NDT personnel have to be trained and qualified according to the specific written practice of the manufacturer, which describe the responsibilities of the qualification and certification of NDT personnel that perform the test of the part and report it's conformity with the requirements of the relevant ASME code.

## ICNDT Secretariat

All are invited to take part in keeping this journal alive!



S. Ghia



E. Rochfort

Subscriptions help in keeping this Journal alive!

## FAX

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E-mail: icndt@icndt.org

Send this form and you will receive the ICNDT Journal



## THE 28<sup>TH</sup> MEETING OF THE INTERNATIONAL COMMITTEE FOR NDT WAS HELD IN BARCELONA, SPAIN, ON THURSDAY 20 JUNE 2002 DURING THE 8<sup>TH</sup> ECNDT.

The 28<sup>th</sup> ICNDT Meeting was attended by a total of 45 persons representing 33 world wide countries (27 of which voting). Many important items was approved . Among these are the following: ICNDT Recommendation Guidelines for Qualification and Certification of NDT Personnel according to ISO 9712, Fine tuning of Constitution, ICNDT Financial Statement. The Minutes of the 28<sup>th</sup> ICNDT meeting are available on ICNDT web site [http://: www.icndt.org](http://www.icndt.org)

Country	Name	Society	Voting
ALGERIA	Faourez Bettayeb	CSC	-
ARGENTINA	Eisa Hogert	ENDE-CAC-CNEA	✓
	Mario Armette		-
AUSTRIA	Gerhard Aufricht	Austrian Society for NDT (OGZP)	✓
	Heinrich Theiretzbacher		✓
BANGLADESH	Mahi U Khan	BSNDT	✓
BRAZIL	Maria Izabel Gebrael	ABENDE	✓
	Joao Antonio Conte		-
	Jose S R Jinier		-
CANADA	Douglas Marshall	CINDE	✓
	Douglas Whitely		-
	Richard V Murphy	ISO	-
CROATIA	Ana Lypolt	CrSNDDT	✓
CZECH REPUBLIC	Pavel Mazal	CNDT	✓
DENMARK	Bjarne Larsen	Danish Society for NDT	✓
FRANCE	Michael Poudrai	COFREND	✓
GERMANY	Rainer Link	DGzFP	✓
GREECE	Ioannis Prassianakis	Hellenic Society of NDT	✓
HUNGARY	Ferenc Fuscok	Scientific Society of Mech. Eng Org. of NDT	✓
INDIA	Dr Baldev Raj	Indian Society for NDT	✓
IRAN	Kamal Mahzoon	Iranian Society for NDT	✓
	Mirmajid Ghaemi		✓
IRELAND	Michael J Prendergast	Irish Inst. Of Welding & Eng. Inspection	✓
ISRAEL	G Shoef	Israeli Society for NDT	✓
ITALY	G Nardoni		✓
JAPAN	Mikio Takagi	JSNDI	✓
MALAYSIA	Yeo Yan Teng	MSNT	✓
MOROCCO	Rachad Alami	COMEND	✓
	Mohammad Lahlou		✓
NETHERLANDS	Hein Hoogstraate	KINT	✓
NORWAY	Rune Kristiansen	Norwegian Soc. For NDT	✓
POLAND	Jan Mottl	Polish Society for NDT	✓
PORTUGAL	Luis M Ferreira Negro	RELACRE	✓
	Luis Vieira Gomez		✓
RUSSIA	Proxy for V Klyuev	Russian Society for NDT	✓
SLOVENIA	Janez Grum	Slovenian Society for NDT	✓
SPAIN	Emilio Romero	AEND	✓
UKRAINE	Andrey Shekero	USNDT	✓
	Valentin Uchanin		✓
UNITED KINGDOM	Steve Lavendar	BInstNDT	✓
	Mike Farley		✓
URUGUAY	Silvia Infanzon	AENDUR	✓
USA	John Stringer	ASNT	✓
	Thom Passek		✓
VIETNAM	Nguyen Minh-Hong	Vietnam Assoc. for NDT	✓



ICNDT Meeting Participants



Mr Romero President of AEND presents to Mr Nardoni a painting as reminder of 8th ECNDT



Mr Marshall Chairman of 16th WCNDT and Mrs Gebrael Chairman of 3rd PANNDT.

### ICNDT Financial Accounts ( Euros )

Year	1999	2000	2001	2002	Average/year
<b>SECRETARIAT</b>					
Durable Equipment	0	0.00	2916.26	1255.16	2085.71
Maintenance	0	0.00	309.87	0.00	154.94
Phone/Internet	0	0.00	671.16	1591.35	1131.26
Printing of Documents	1260.15	4446.18	63.21	4642.00	2602.89
Mail	0	2272.41	672.63	0.00	736.26
Consumables	0	2076.16	61.97	225.16	590.82
Cost of personnel	6510.04	7538.98	2852.39	11284.00	7046.35
Reimburs.and subsistance	672.69	1048.92	11687.42	437.62	3461.66
<b>Total</b>	<b>8443.91</b>	<b>17383.68</b>	<b>19235.96</b>	<b>19435.29</b>	<b>16124.71</b>
<b>ICNDT Journal</b>					
Printing	11349.14	9531.21	3486.08	4103.00	7117.36
Mail and shipment	2444.83	2455.75	1070.16	1960.40	1982.79
<b>Total</b>	<b>13793.97</b>	<b>11986.96</b>	<b>4556.24</b>	<b>6063.40</b>	<b>9100.14</b>
<b>MISSIONS</b>					
Chair	854.74	2754.26	14984.12	3035.00	5407.03
Secretariat	1713.09	0.00	2730.89	3797.00	2060.25
Members	0	5336.70	1175.10	2251.00	2190.70
Meetings	0	0.00	0.00	7994.00	1998.50
<b>Total</b>	<b>2567.82</b>	<b>8090.97</b>	<b>18890.11</b>	<b>17077.00</b>	<b>11656.48</b>
<b>Gran Total</b>	<b>€ 24,805.70</b>	<b>€ 37,461.61</b>	<b>€ 42,682.31</b>	<b>€ 42,575.69</b>	<b>36881.33</b>

- (1) Printing of ICNDT International Guide, folders and photocopies
- (2) Printing of ICNDT Journal
- (3) Reimbursement to relevant members
- (4) Cost of ICNDT meeting in Barcelona



Total amount of Euros 147.523 donated by the Italian Society for NDT to support ICNDT new asset according to the new constitution approved in Rome 2000.





## THE 6th FAR EAST CONFERENCE ON NON DESTRUCTIVE TESTING. TOKYO, Japan, 21-24 October 2002 On conjunction with the celebration of the 50th Anniversary of the Japan Society of Non Destructive Inspection (JSNDI)

The 6th Far East Conference on Non-Destructive Testing was held on Tokyo 21-24 October 2002 on conjunction with the celebration of the 50th Anniversary of the Japan Society of Non Destructive Inspection (JSNDI). The conference, in the English language, brought together experts from the Far East with particularly strong representation from the academic communities in Japan, Korea and Taiwan. Papers on the full range of methods (ulasonics, stress and strain measurement, eddy current, infrared, acoustic emission, magnetics, radiography, and optical method) were supplemented by three sessions specifically on NDT of Concrete. A total of one hundred referred papers were presented.

Proceedings have been published by JSNDI and are available on CD-ROM from JSNDI.

## INTERNATIONAL PANEL DISCUSSION ON QUALIFICATION AND CERTIFICATION OF NDT PERSONNEL Tokyo, Japan, 22 October 2002

An international panel discussion on qualification and certification of NDT personnel was held in conjunction with the 6th Far-East Conference on Non Destructive Testing. Objective of the panel was to provide an opportunity for each panellist to present information on how NDT personnel are currently qualified and certified in each organisation, and to discuss this topic with other in attendance, thereby broadening awareness and understanding of the situation in each organisation.



### REPORT BY MIKE FARLEY

During the conference an important International Panel Discussion was held on Qualification and Certification of NDT Personnel. Ten short presentations were given:-

Mr Kiyoshi Kato (JSNDI) described the current Japanese certification system (58,766 certificates issued to the end of 2001) with three levels to the NDIS standard 0601.

Dr Yukio Ogura (JSNDI) explained that JSNDI will move to Japanese standard JIS Z 2305 based on ISO9712 from 2003.

Mr Roy Gilmour (AINDT) stated that ISO9712-1999 soon to be AS 3998-2002 is now being used as a basis for certification in Australia and the Australian Institute AINDT has been awarded accreditation as a certifying body to EN45013 by the Australian equivalent of UKAS (JAS-ANS).

Dr Giuseppe Nardoni (ICNDT) expressed his delight at the widespread adoption of ISO9712, which is based on the initial work on training guidelines by ICNDT. He explained that ICNDT is preparing a Handbook of Guidelines on Qualification and Certification of NDT Personnel according to ISO9712. The draft had been circulated for comment in Barcelona to the full ICNDT and so far comments have been positive. We can therefore be confident that the Handbook will be finalised without a great deal of change. Mr Stephen Black (ASNT) concentrated on the newly announced transition arrangements for ASNT Certificate holders to ACCP driven, he explained, by the need to promote third party certification at the behest of codes and standards making bodies. Individuals "transitioned" under the new arrangements will have to take an examination within five years.

Dr Mike Farley (ICNDT/EFNDT) described the present status of PCN as an accredited third party certification scheme run by BInstNDT to meet the needs of industry whilst complying with EN473 and ISO9712. PCN is healthy and growing (both geographically and in technical scope) and is a founder member of ECP.

Speaking on behalf of EFNDT, Mike Farley described the formal status of the European Federation of NDT and the mutual recognition agreement between the NDT Societies of Europe. More than 150,000 EN473 certificates have been issued by 30 NDT societies. Responding to the need for greater harmonisation, the EFNDT has created ECP – the European Certification Process which provides Certification Bodies with a common definition of sectors, a bank of examination questions, specifications for practical exams and examination specimens. The NDT Societies of France, Germany and Britain have announced that they will each adopt ECP during 2003 and other certification bodies are expected to follow.

Dr Geng Rong Sheng (ChSNDT) explained the position in China. The Chinese standard (GB9445) has been modified to reflect ISO9712-1999 and a unified National Certifying Body (with Authorised Bodies and Examination Centres) is being set up through the Chinese National Bureau of Technical Supervision.

Dr Jong Po Lee (KSNT) described the present position in Korea with four levels (roughly equivalent to Levels 1, 2 and 3 plus a Professional Engineer Level). Large numbers (>10,000) of these Korean national certificates have been issued. There are also smaller numbers of ASNT Level III Certificate holders (554) and Korean Electric Power Industry Codes Certificate holders (~2,500). However none of the three schemes complies with ISO9712 and the Korean NDT Society is studying how to address this.

Dr Chung-Yue Wang of the Society of Non destructive Testing of China-Taipei explained that since 1981 in Taiwan certification was in accordance with ROC-SNT-PQ-01, itself based on SNT-TC-1A. In 1996 the national standard CNS-13588 was established in compliance with ISO9712. The NDT Society is seeking to implement this new standard as a step towards the goal of international mutual recognition.

Discussion centred on how ISO9712 schemes could gain recognition (by European PED Notified Bodies, ASME etc.). The role of "proficiency testing" to compare the relative proficiency of certificate holders from the various international schemes was outlined by Mr Gilmour.

The Chairman Dr Norikazu Ooka of JSNDI summarised the conclusions and recommendations of the Panel Discussion as follows:-

- Guidelines should be developed and agreed by ICNDT, ASNT, FENDT, EFNDT and APCNDT on requirements for mutual recognition of National NDT Certification schemes.

- Agreement needs to be reached on industry sectors covered by certification schemes and different requirements of industry sectors e.g. Nuclear, Aerospace, Pressure Vessel, General Engineering.

- FENDT to propose to APCNDT to form a Working Group to participate in development of Guidelines.

- It is important that the Asia and Pacific Region is more involved in the development of Mutual Recognition of NDT Certification Schemes.

The best forum for this would seem to be APCNDT. It is recommended that a stronger role is given to APCNDT by FENDT.



Mike Farley

## INDIA - NDE 2002

National Seminar of the Indian Society for NDT Chennai, 5-7 December 2002



## ICNDT Executive Committee Meeting Chennai, India, 6 December 2002

### TOPICS DISCUSSED AT ICNDT EXECUTIVE COMMITTEE MEETING in Chennai

#### CHAIRMAN'S REPORT – ISO 9712 GUIDE

An Editorial Committee has been appointed for preparation of next version of ICNDT Guidelines for Certification and Qualification of NDT Personnel. It includes:

Mr. Lavender and Thompson ( UK ), Marshall and Murphy ( Canada), Raj ( India) and Ooka ( Japan).

#### WORLD CONFERENCE MONTREAL 2003

Mr Marshall presented an up dating of the World Conference preparation.

#### ICNDT JOURNAL

An Editorial Committee has been proposed. The first nucleus includes:

Mr. Nardoni, Lavender, Ooka, Conte

#### IAEA LIAISON

Discussions with IAEA will continue

#### ACTIONS FROM PGP AND ICNDT

Mr Farley handed out drafts of the following Procedures :

-Elections of Officers and Committees

-Financial Management

-Recognition of Regional/Continental Groups of ICNDT

-Awards

-World Conference Financial Report

-Approval of ICNDT Publication

Honorary Membership

#### LEGALISATION OF ICNDT

It was suggested to adopt the EFNDT Model

#### FINANCING OF ICNDT

The Italian Society has already spent its 25% WCNDT Profit Contribution and a great more. Actions are in progress to explore possible external funding.

#### NOMINATIONS FOR ELECTIONS IN 2004 – MONTREAL

The desirability of attracting a satisfactory set of nominations has been discussed

#### STRATEGIC PLAN

Mr Nardoni will prepare a draft for next meeting

An internal meeting will be held on ICNDT Web Page

#### ASNT

A meeting between members of ICNDT Executive Committee and senior members of ASNT Board will be requested





# Draft of ICNDT Recommended Guidelines presented in Barcelona at the 28<sup>th</sup> ICNDT Meeting

**ICNDT**  
ICNDT WH-RG-16/02

**ICNDT Recommended Guidelines for Qualification and Certification of NDT Personnel according to ISO 9712 Standard**

**Content:**

- ✓ Introduction to ICNDT Guidelines
- ✓ Introduction of ISO-TC-135 Chairman
- ✓ ISO 9712 Standard ed. 2000
- ✓ Training Syllabus, ICNDT Minimum Requirements ed. 2000

**Appendices:**

- 1) Basic principle of Nondestructive Testing
- 2) The role of ICNDT in the Certification Program
- 3) Most relevant third party certification schemes: ACCP, EN-473, ISO 9712
- 4) ICNDT Directory

**References documents:**  
ISO 9712, EN 473-4179, ACCP, SST-TC-1A.

**ADVANTAGE OF ISO 9712 CERTIFICATION**

- Increased training hours
- Training syllabus up dated by ICNDT Working Group and ISO-TC 135- SC7- WG2
- Examination made independent examination centres under control of the certification body
- More detailed requirements for practical examination ( description of test pieces and references )
- Audits of certifying body through the authorized qualification authority

Forward to ISO 9712  
by Mikio Takagi Former Chairman of ISO TC 135

Since the effectiveness of any application of non-destructive testing depends upon the capabilities of the persons who perform or who are responsible for the test, a procedure was developed to provide a means for evaluating and documenting the competence of personnel whose duties require the appropriate theoretical and practical knowledge of the supervise, monitor or evaluate. An added incentive range of industrial applications requiring common non-destructive testing approaches.

Any certification body adopting this International Standard shall comply with level 3 requirements for qualification and certification, but is permitted a transition period of up to five years to implement levels 1 and 2.

The aim is to permit the starting of the system in a country that has no third party certification. It is also applicable when an independent certification body applies the certification scheme to a new NDT method or when a new industrial sector is created.

It is recognised that efforts of ICNDT have provided a valuable contribution to implement the outstanding schemes for qualification and certification of NDT personnel.

An extensive application of this norm to industry will improve reliability of industrial products and safety of the world wide community.

Dear Sergio,

I recently received the 2002 Draft copy of the "ICNDT Recommended Guidelines for Qualification and Certification of NDT Personnel according to ISO 9712"

I enjoyed it very much.


If at all possible I would appreciate another four copies to share with my Executive and Certification Board Secretary.

Please confirm if you are able to send me additional copies.

**Appreciation**

Ciao,

John Maccarone  
AINDT Federal President  
Phone: + 61 7 3243 7365  
Fax: + 61 7 3243 7544  
email: maccarj@az1.bp.com

from 1955  "the world organization for NDT"

INTERNATIONAL COMMITTEE FOR NON DESTRUCTIVE TESTING

**"a challenge for safety"**

**ICNDT RECOMMENDED GUIDELINES FOR QUALIFICATION AND CERTIFICATION OF NDT PERSONNEL ACCORDING TO ISO 9712**

Draft 2002

----- Original Message -----

From: Ecuador "Sendre Cia. Ltda."  
To: ghia-icndt  
Cc: icndt@icndt.org  
Sent: Friday, September 27, 2002 11:49 PM  
Subject: ICNDT GUIDELINES

**Appreciation**

DEAR MR. GHIA,

I HAVE RECEIVED THE ICNDT RECOMMENDED GUIDELINES FOR QUALIFICATION AND CERTIFICATION OF NDT PERSONNEL ACCORDING TO ISO 9712 STANDARD, AND I FOUND IT VERY VALUABLE AND USEFUL TO ACCOMPLISH THE QUALIFICATION AND CERTIFICATION OF NDT PERSONNEL ALL OVER THE WORLD.

CONGRATULATIONS FOR THIS EXCELLENT WORK.

BEST REGARDS

OMAR SERRANO  
ESPOL - ESCUELA POLITECNICA DEL LITORAL  
QUAYAQUIL - ECUADOR

## EMPLOYER RESPONSABILITY

In order to comply with ISO 9712, Cap.5, and with the applicable Quality Systems of construction Code the employer shall meet the following items:

- The employer shall introduce the candidate to the certification body or the authorized qualifying body and document the validity of the personal information provided. The documentation shall include the declaration of education, training and experience needed to establish the eligibility of the candidate.
- The employer shall not be directly involved in the qualification examination. Where the examination centre is within the employer's premises, or examination staff are provided by the employer, the Certification Body shall require additional controls to preserve impartiality.
- In respect of certified personnel under their control, the employer shall:
  - a) be fully responsible for all that concerns the authorization to operate
  - b) be responsible for the validity of the results of NDT operations.
  - c) ensure that the annual visual acuity requirements of 7.1.1(a) are met.
  - d) verify continuity in the application of the NDT method without significant interruption.
- A self employed individual shall assume all responsibilities described for the employer.
- The employer shall maintains the written certification of NDT Personnel.

**Employer written procedure**

The employer shall prepare a written procedure for the correct application, administration and control of the certified NDT personnel in order to guarantee the products of the company to be in compliance with international/national regulations in force.

The written procedure shall include at least the following main items:

- a) Qualification and Certification standard adopted by the employer.
- b) Level of certification required.
- c) Responsibility for each level of certification for determining the acceptance of materials and/or components according to the applicable codes, standards, specifications and procedures.
- d) Person(s) appointed by the employer for training or checking the certified personnel charged with examinations of company products.
- e) Up dating and qualification of personnel for incoming new NDT techniques not yet included neither in the ISO 9712 nor in other schemes.

## "a challenge for safety"

**1) INTRODUCTION**

With great pleasure the **International Committee for Nondestructive Testing** is proud to present to the worldwide NDT Community, to the Institutions, to the Authorities, to the general public, the:

**ICNDT RECOMMENDED GUIDELINES OF THE QUALIFICATION AND CERTIFICATION OF NDT PERSONNEL BASED ON ISO 9712.**

The document represents **45 years** of continued efforts of ICNDT to disseminate **NDT technologies**, to promote **harmonisations** and mutual **recognition** of minimum requirements of the different existing certifications schemes.

The decision of ICNDT to adopt ISO 9712, as a **basic standard** for the **Qualification and Certification of NDT Personnel** arise from the need to achieve **higher standard** in the **basic knowledge** and **capabilities** of NDT Technicians.

The strong change in the **Industry**, the increased request of more sophisticated NDT technologies related to **high risk** projects has made this choice irrevocable.

The **ICNDT Regional Groups**, as the **European Federation** for NDT, the **Pan American Committee for NDT**, the **Asia Pacific Committee for NDT**, and the incoming **Africa Federation** for NDT have already oriented on ISO 9712 their certification programs.

In Europe, for example, the certification is made according **EN473** that will merge rapidly into the ISO 9712 norm; in the **UNITED STATES** the ACCP (ASNT Central Certification Program) foresee in its programs the ISO 9712 certification.

In Japan ISO 9712 is Industrial standard; many other Countries are following the same trend.

Great **support** to the dissemination of ISO 9712 has been given from **IAEA** (International Atomic Energy Agency) that has applied in their projects in West Asia, in Africa, in Far East etc, the ISO 9712 as reference scheme.

Great support comes from the recent introduction in the ASME Code of the **third party certification** beside the **employer based** certification.

Great support comes from many world wide **Engineering Companies** which require for their construction the certification of NDT Personnel according ISO 9712.

We really believe that the world wide application of the **ICNDT Recommended Guidelines** will improve the **general reliability** of **NDT examinations** assuring a higher grade of **safety** as the actual state of technology is able to give.

ICNDT will **up date**, along the years the present document in order to maintain the ICNDT Recommended Guideline a workable document aligned with the incoming NDT methods and techniques.

Great thanks to the ICNDT Working Groups for their precious voluntary contribute.

The draft of this document was issued to ICNDT Members and others for comments in Barcelona. A revision of the Guidelines is being prepared and will be issued during 2003 following approval by the Policy and General Purpose Committee.