

the  
journal

# ICNDT journal

November 1999 – Issue n. 4

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

*The world Organisation for NDT*

*In Memory  
of Prof. Schnitzger*

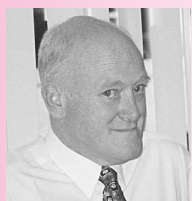


The NDT Community is astonished. It has lost a strong support in the passing away of Dr. Schnitzger, President of DGZfP. We will feel his loss greatly. His enthusiasm in leading the European Federation of NDT has been an example to us all. Even as recently as the Fall Conference in Phoenix, Arizona, (a week before his death), he was working on the foundations of new projects to be realized in the 21<sup>st</sup> Century. We thank you Dr. Schnitzger for all you've done for us and for the kindness you extended to the people around you. In the depth of our prayer we are with you as you enter your new life. We bid you farewell as we try to come to terms with your absence. From all your good friends in ICNDT.

ICNDT

## Crossing into the new Century

### Attending the 15<sup>th</sup> WCNDT Roma 2000!



Dr. J.M. Farley

### *A Vision of NDT in the New Millennium\**

by Dr. J.M. Farley

*\*Paper presented at 7<sup>th</sup> CbSNDT Conference on NDT*

#### Looking to the future – the political and economic environment

Looking to the future it is important to stand back and examine the changing political and economic environment in which NDT is executed, worldwide.

Globalisation of world trade is extremely important for NDT. Increasing numbers of projects and products are multinational. Power stations, petrochemical plants, aircraft are designed in one country and built in others with equipment and raw materials procured around the world. To execute major projects led from one country, it is frequently necessary to employ ex-patriate labour from other countries, including NDT personnel. Companies tendering for and executing major projects need to be able to call up standards and local certificated personnel and organisations to execute NDT reliably to order.

At the same time, in many developed countries, the companies responsible for major projects and for operating plant are reducing their own staff and their specialist resources in response to competitive pressures. They do not have the people with the detailed knowledge of the complexities of NDT to judge if it will be executed correctly. They increasingly must depend on standardisation and certification and on the suppliers of equipment and services.

Within the European Union, national governments and European policy-makers are committed to freedom of movement of goods, services and labour. This impacts on certification of products and of NDT personnel. Critical decisions are being taken at European level. For example, European Directives incorporate Essential Safety Requirements and these are addressing NDT. How NDT is executed and by

whom will be specified at a European level and national governments will have to comply.

#### Looking to the future – environmental and safety

People worldwide are increasingly conscious of the need to protect the environment. This is not purely a concern in the Western world but increasingly important in the developing world too. Environmental disasters do not respect national boundaries as evidenced by global warming and nuclear fall-out.

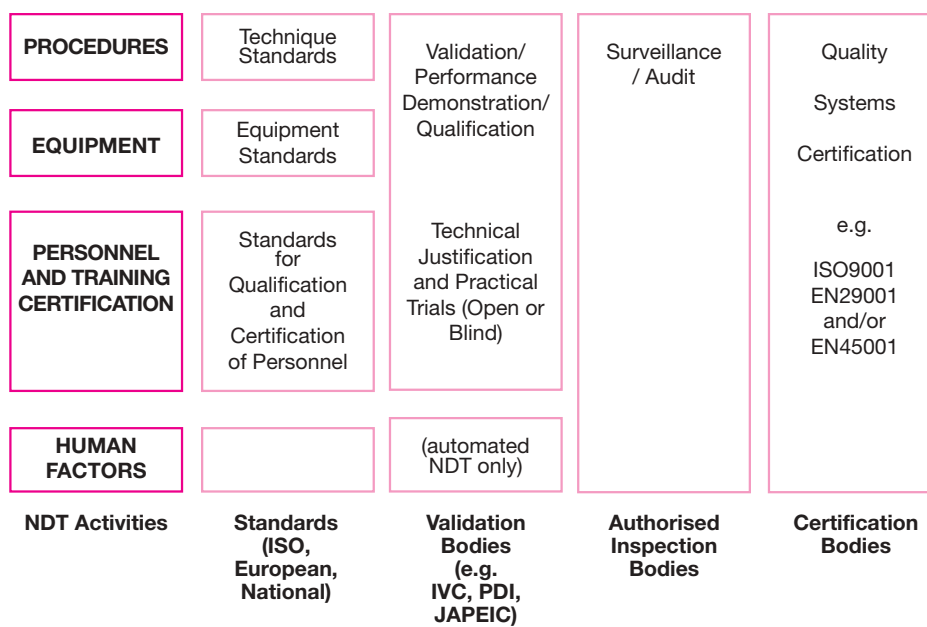
plant such as power plant (nuclear and conventional), oil platforms, petrochemical plant and of ageing aircraft is increasingly important and dependent on highly reliable NDT. This is well understood in the aerospace industry and reflected in US (FAA) and UK/European (JAA) requirements.

(III) Increasingly NDT solutions rely on complex computer controlled equipment and technology which are outside the scope of the training syllabi of traditional NDT courses and not checked/measured by existing Certification Systems. This situation can only "worsen" as technological development continues.

#### Roles of Certification and Standardisation

Certification and standardisation have important roles within the infrastructure which has grown up to assist in the achievement of quality and are already the prime focus of activity in ISO, ICNDT etc. Quality in execution of

Figure 1: NDT Quality Infrastructure



NDT has an important role in the protection of the environment and the safety of people living close to plants (eg. pipelines, petrochemical plants, power stations, airports etc.).

#### Looking to the future – technical environment

The importance and technical complexity of NDT is growing.

(I) Where new materials or new design methods are introduced NDT is important to monitor performance in-service. Design margins are being reduced to take advantage of developments in materials and in design methodologies, and also are subject to the pressures of competition.

(II) Life extension of major capital

NDT operations demands attention to a series of interlinked aspects extending from the underlying science, research and development, procedures, standards, equipment, personnel training and certification to the effects of human reliability and the influence of auditing and surveillance and quality systems. These aspects can be represented as links in a chain.

The chain will only be as strong as its weakest link. Extra attention to one link in the chain cannot compensate for lack of attention to another – just as a strong link in a chain cannot compensate for a weak link.

For example, personnel certification as a measure of the capability of personnel to carry out NDT is a vital link in the chain. Standards, procedures,

#### 2000: a hope of Peace



*2000! a new century characterised by a determination to establish an era of peace. The world press is unanimous in its expression of the hopes of each of us, to leave the centuries of wars that have plagued our world.*

*We address our invocation to God and we ask his help in making our Hope, reality. The first step necessary to take towards building this peace is to promote friendships.*

*The NDT Community with its extraordinary activity throughout the world has made substantial contributions to forging friendships across the globe.*

*As ICNDT President, I would like for the season and the coming 2000 to take this opportunity to thank you all for your outstanding efforts. Thank you all for your untiring dedication to this noble cause and for your willingness to enlarge the bonds of friendship on which our community exists. I wish you and your families joy and peace.*

Giuseppe Nardoni

equipment controls, audits, surveillance etc. cannot achieve quality if the practitioner carrying out the NDT is not adequately capable. The converse is also true. An NDT skills certificate will not guarantee quality if the practitioner is expected to use inadequate equipment, is demotivated or demoralised by being put under inordinate pressure of time or by being asked to work in impossibly difficult conditions. Neither will a personal certificate ensure quality if the practitioner is asked to carry out tasks which are outside the scope of his certificate without being given the guidance of job-specific training.

National and international standards for quality systems such as ISO 9001 require management to establish quality systems to control all activities which affect quality including NDT. The quality system must address each of the links in the NDT quality chain – to ensure that all the links are in place and properly joined.

An NDT infrastructure (see Figure 1) has gradually grown up which provides some of the building blocks with which NDT quality systems can be constructed. Here the heavy boxes represent the "doing activities" that make up NDT operations, Procedures, Equipment, Training and Certification, Human Factors, whilst the lighter boxes re-

ICNDT

ICNDT Publication

Editor: ICNDT  
Managing Director: G. Nardoni  
Issued: Quarterly  
Printed copies: 10000  
Subscription: 10\$  
Address: Via A. Foresti, 5A  
25127 Brescia (Italy)  
Tel. ++39 030 3739173  
Fax ++39 030 3739176  
E-mail: ipnd@numerica.it

present the various measures designed to achieve quality. Techniques, Equipment and Personnel certification are all the subject of standardisation at National, European and International levels. In Europe standardisation is rapidly shifting from national to European level. As European Standards are published, the corresponding National Standards must be withdrawn. Through the Vienna Agreement, European and International NDT standards will converge. The nuclear industry has introduced the concept of Qualification (also known as Validation or Performance Demonstration) and this is now being extended in various ways to other industries. Organisations executing NDT can have their Quality Systems (ISO9001/2/3) and/or their personnel (EN45013/ISO97012/EN473) certified by an accredited Certification Body and the competence of their laboratories and site operations can be accredited to EN45001. Inspection Bodies, themselves accredited to EN45004, oversee operations in the wider context of their own role. In the area of human factors it is arguable that the present quality infrastructure is lacking. There is a need for a code-of-practice on employment conditions for NDT staff. It is necessary to set down guidelines based on research and experience as to what are appropriate employment conditions and working arrangements for personnel engaged in quality critical activities. Responsibility for the various elements of the infrastructure rests with a variety of organisations, none of which are wholly devoted to NDT. These include organisations responsible for Standards, Certification and Accreditation, each of which concentrates on its own elements of the infrastructure. None is concerned with the complete quality chain.

#### Looking to the future – role of ICNDT, NDT Societies, regional groupings of Societies

The complete quality chain must be the concern of the NDT societies. In no other way can an NDT society seek to fulfil its aim to promote and advance the science and practice of NDT. Given the international nature of the marketplace for NDT it is clear that the traditional "learned society" approach of individual national societies is not enough.

### BELARUS

#### 60<sup>th</sup> BIRTHDAY of Prof. PROKHORENKO



September 19, 1999 is the sixtieth anniversary of a well-known scientist in the field of nondestructive testing and technical diagnostics, a Corresponding Member of the National

Academy of Sciences of Belarus, Doctor of Sciences (Technics), Professor, Director of the Institute of Applied Physics of the NAS of Belarus Petr Petrovich Prokhorenko.

Prof. P. Prokhorenko is the author of more than 200 scientific treatises, including 7 monographies and 64 patents. Theoretical principles of penetrant testing, being worked out under the leadership of Prof. P. Prokhorenko, became well-known due to their presentations at World and European Conferences on NDT (London, 1987; Amsterdam, 1989; San-Paolo, 1992; Nice, 1994; New-Delhi, 1996; Copenhagen, 1998). Main results were presented in the monographs "Ultrasonic Capillary Effect" (1981), "Physical Basics and Means of Liquid Penetrant Testing" (1983), "Introduction into Liquid Penetrant Testing Theory" (1988), "Theoretical Principles of Liquid Penetrant Testing" (1999). The team headed by Prof. P.P. Prokhorenko has developed new methods to increase a sensitivity and productivity of

NDT with the use of both ultrasonic and magnetic fields and new technological media – magnetic fluid. These results have been described in the monographs "Hydrodynamics and Heat Transfer in Gradient Flows of Microstructural Fluids" (1984), "Acoustic Cavitation Near Solid Surfaces" (1990), "Ultrasonic Metallization" (1987).

### CROATIA

#### MATEST '99



Prof. Vjera Krstelj

The National Congress of the Croatian Society for NDT was held in September, 23-24, in Cavtat, a quaint village located near Dubrovnik on the Adriatic sea.

The CrSNDT President Prof. Vjera Krstelj, chaired the opening session. In her key note address, she gave a warm welcome to the more than 150 attendees coming mostly from Croatia but also from Bosnia - Herzegovina, Germany, Greece, Italy, Poland, Slovenia and U.S.A. There was a short address given by invited guests, the late Prof. Dirk Schnitzger, on behalf of EFNDT and Mr. Sergio Ghia on behalf of ICNDT.

The Technical programme covered many aspects in the NDT field, including the application of both the more typical NDT methods as well as some more advanced techniques. The problem concerning land mine detection was strongly stressed at the congress, as it is particularly pertinent to the Croatian situation where it presents an ongoing problem because of the high number of mines located there. There were reports given on *Croatia land mine removing programme* and on the *EFNDT Working Group for Antipersonnel Landmine Detection* headed by Prof. Krstelj.

At the conclusion of the Congress there was a gala dinner held in a warm and friendly atmosphere.

### TURKEY

#### FIRST INTERNATIONAL NDT SYMPOSIUM

by Hakan Gur

The 1<sup>st</sup> International NDT Symposium and Exhibition has been held by NDT Committee of the Chamber of Metallurgical Engineers in Ankara on Sept.29 to Oct. 1.

44 papers (26 from Turkey, 18 from other countries) were presented in 10 sessions. During the sessions there was simultaneous translation (english-turkish-russian).

16 countries were represented (as authors, delegates, companies and visitors) in this event including Azerbaijan, Belgium, Bulgaria, Canada, Denmark, England, France, Germany, Iran, Israel, Netherlands, Russia, Sweden, South Africa, Turkey and USA.

The President of EFNDT, Prof.Dr. Dierk Schnitzger (RIP), made a presentation on EFNDT in the opening session. Mr. Anatoliy Gurwich delivered a speech in the technical session on NDT in Russia.

In the panel session, the present situation of NDT training in Turkey was discussed. In the "get-together event", the plakets were given to the Presidency of the Middle East Technical University for its contribution to this event, to the companies NDT Cihazlar, TESST, KB-Thermit for their financial contribution to the symposium; to the late Prof. Dr. Schnitzger, Mr. Friedrich Mischke and Mr. Dieter Janke for their contributions to the development of NDT in Turkey. To-

tal number of participants exceeded 400.

There were 15 exhibition stands representing 52 NDT companies. In the evaluation meeting after the symposium, all of the exhibitors and organizers agreed that the event was a great success.

There was also an agreement on the realisation of the 2<sup>nd</sup> International NDT Symposium and Exhibition in 2001 (probably in Istanbul) by the NDT Committee of the Chamber of Metallurgical Engineers.



Hakan Gur

### USA

#### ASNT- FALL CONFERENCE

With over 800 attendees, hundred and fifty from abroad, hundred and twenty oral presentations, ninety exhibitors the ASNT Conference held in Phoenix, Arizona enjoyed tremendous success.



H. Sadek

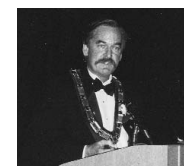
Numerous specialist meetings, seminars, panel discussions, professional short courses, examination sessions for personnel certification formed part of the impressive line-up of events which took place over the four day conference, 11-14 October '99.

The 120 papers of the technical programme were delivered over 24 sessions and divided into 4 main groups, namely: 1) General NDT technologies, 2) Emerging NDT technologies track, 3) Industrial track and, 4) Radiography track.

The Papers included many innovative topics such as laser methods, transducer technology, computational techniques, filmless radiography, advanced material and requirement for the future in aerospace and many other more typical ones like technology transfer, training and safety etc...



Dr Green



Dr Daggart

The Quality Testing Show had more than ninety Exhibitors covering the complete NDT field including both typical and innovative equipment and inspection services.



Mr Yabavoulos, Mr Culbertson at the Awards Banquet.

The Annual Awards Banquet was held at the Hyatt Regency Hotel in a formal and elegant setting marked by its friendly atmosphere. Many awards were presented to ASNT staff members as well as to ASNT Members in recognition of their significant contribution to the advancement of NDT. The ceremony marking the passing over of the President's collar from the outgoing President, Dr. Green to his successor Dr. Daggart was also very impressive.



Dr. Daggart's family

### VIETNAM

#### NDT KICK-OFF

The Vietnam Association for Non-Destructive Testing (VANDT) has been created by the Decision N0. 26/ 1999 of the Government of Vietnam. The major objective of VANDT is to promote NDT techniques and culture throughout the country.

Other important objective and activities include the organization of conferences, workshops and training courses for personnel qualification and certification.

The Vietnam Association for Non-Destructive Testing is an independent and non-profit organization.

The First VANDT Conference and Exhibition on NDT will take place in Hanoi - Vietnam in early December 1999.

ICNDT wishes to congratulate VANDT on its recent initiation and to extend a very warm welcome to this new NDT Association. We would like to take this opportunity to wish them every success in the future.

### CHINA

The 7<sup>th</sup> ChSNDT Conference on NDT and International Research Symposium has been held in Shantou-China in Oct. 26-30, 1999. The Conference was enjoyed by the many, from China and abroad, who attended the Exhibition and the presentations which



Rome 2000 highlighted in the exhibition stand of the Ultrasonic Institute of China

included over 180 technical papers covering all the major NDT topics (More information will be reported in next issue)

#### ICNDT address at the opening Ceremony of the 20<sup>th</sup> anniversary of ChSNDT made by Douglas Marshall

I would like to thank you for the opportunity to address you on this historic occasion, the 20<sup>th</sup> anniversary of the Chinese Society for Nondestructive Testing.



D. Marshall

I have been requested to represent the International Committee for Nondestructive Testing and address you on behalf of our ICNDT President, Dr. Nardoni from the Italian Society for Nondestructive Testing. I therefore would like to welcome each and everyone to this grand gala and celebrate the 20<sup>th</sup> Anniversary of the Chinese Society. The International Committee for Nondestructive Testing would like to take this opportunity to congratulate the Chinese Society for their contributions and dedication to the professionalism of our chosen field "Nondestructive Testing" over the last 20 years. Also, for China's participation and membership in the ICNDT since 1985. ... In 1996, the Chinese Society made a formal presentation at the 14<sup>th</sup> World Conference in India to host the 16<sup>th</sup> World Conference for Nondestructive Testing. Although the bid was unsuccessful mainly due to the need to rotate the World Conferences around the globe, they more than assured the lead position for the 17<sup>th</sup> Conference in 2008 because of their determination and knowledge that they are a world leader in Nondestructive Testing.....

Again, I would like to thank the Chinese Society for the opportunity to be active in celebrating their 20<sup>th</sup> anniversary and wish you continued success as a leader in Nondestructive Testing.

**CHINA**

**Chinese Society for NDT**

by Guo Chengbin



Mr Guo

The Chinese Society was founded in 1978. The First President of the Society was Prof. Dr. C.F. Ying, a member of the Academia of China. The Present President is Mr. Yao, director of Shanghai. The staff of the secretariat is professional. The main goal of the Society is to promote NDT in China. It organizes National Conferences on NDT every 3 or 4 years, a few Symposiums and Seminars on specific NDT techniques every year. It organizes delegates to attend international NDT Conferences, such as WCNDT and APCNDT. The Society runs a journal "Nondestructive Testing" monthly. It is at the 21<sup>st</sup> volume at present.

International cooperation is one of the main priorities of ChSNDT's activities. The Chinese Society for NDT was accepted for membership in the International Committee on NDT in 1979, the second year after its foundation. The Chinese society is one of the most active members of ICNDT. It is one of the members of PGPC committee. The Chinese Society sends delegations to every World Conference on NDT. We would be very honored if our proposal to hold the 17<sup>th</sup> WCNDT in China was accepted at the ICNDT meeting in Rome 2000. We successively organized 7<sup>th</sup> Asian-Pacific Conference on NDT, 1993 in Shanghai. We are experienced in organizing international conferences. The Chinese Society is interested in developing cooperation between NDT societies. We have signed agreements on professional cooperation with Brazil, Canada, Germany, India, Japan, Korea, Russia and United States.

Qualification and certification of NDT personnel is another priority in ChSNDT's activities. The Qualification and certification committee of ChSNDT runs a wide spread program including international cooperation on harmonization. One of the most important activities of international cooperation is world harmonization and international recognition of personnel certification in NDT. Agreement on mutual recognition of personnel certification in NDT between Chinese and German societies for NDT is one of the steps in this direction. The Chinese Society for NDT is taking an active part in the preparation of a new national standard on qualification and certification of NDT personnel. New national standard accredited ISO 9712 schemes will be another useful step.



Mrs Zhu

**SOME FIGURES CONCERNING NDT IN CHINA**

Methods	Involved personnel	Equipment Producers	Main field of application	Research (examples)
UT	> 20000	some tens	railways, chemical	Robotic ultrasonic scanner of 5dimension
ET	> 3000	> 10	tubing	far field eddy current
MT	> 3000	> 10	automobile, tractor locomotive, aircraft	theoretical
AE	200	-	pressure vessls	aircraft, composites, concrete, rocks
RT	the most popular	satisfying domestic needs	-	Compton back scattering



Mr. B. Raj

Past President of ICNDT, President of PGP Committee

**PGP Meeting in Shantou**



Photo with all members that participate to PGP meeting. (l-r) Mr. Tako, Mr. Klyuev, Mr. Guo, Mr Nardoni showing the panoramic picture of the participant to the Chinese Conference, Mr. Marshall, Mr. Black.

The second annual PGP meeting was held in Shantou, October 28 1999, hosted by the Chinese Society for NDT. In attendance were the following: Mr. Marshall (Canada), Mr. Black (USA - ASNT), Mr. Guo (Chinese Society for NDT), Mr. Tako (Japanese Society for NDI), Mr. Nardoni (ICNDT Chairman), Mr. Klyuev (President of RSNDT). All the items on the agenda were discussed and considered in line with ICNDT policy. The main outcome of the meeting included the following:

- The approval of the first seminar on ISO 9712 standard to be held in Rome during the World Conference (1 1/2 days duration). The Chairman of ISO TC-135 will chair the opening session of the seminar. Mr. Murphy (Canadian Certification Board) has been recently nominated as ISO Representative in ICNDT. This represents a major step towards a future global recognition based on ISO 9712 standard.
- The **constitution** has been fully approved.
- The **dialogue with ASME** has to be continued. ASME and other **Authorities for pressure vessels, aircrafts** etc. will be invited to the seminar.
- Two **NDT Awards** will be established, entitled to **W. Rontgen** and **Prof. Pawlowski** Awards. The former, to pay tribute to his contribution as the initiator of NDT techniques just a century ago, the latter to acknowledge the promoter of relationship within NDT Community.
- The next goals of the ICNDT Presidency are to organise the following: i) a common meeting for the NDT Representatives from Central and South American Countries; ii) foundation meeting of the first nucleus of Africa - Middle East Regional Group.

**ICNDT Secretariat open Window**

The ICNDT Secretariat, with a view to maintaining a close, lively link with its membership, issues this column devoted to publishing news, information or simply messages received from Societies. All are invited to take part in keeping this column alive!



S. Ghia



E. Rochfort

**F A X**

**ICNDT Journal Subscription Form**

I would like to receive the next four issues of ICNDT Journal.

Name .....

Surname .....

Company .....

Address ..... City .....

State ..... Zip .....

Phone ..... Fax .....

E-mail .....

Date ..... Signature .....

**Method of payment**

Bank Transfer

Check

Credit Card N° .....

Exp. Date .....

Authorised Signature .....

Subscription cost : US \$ 10 for one year ( 4 issues )

**Payment must be addressed to :**

Istituto Bancario San Paolo di Torino  
Brescia Agency N° 5- Via Crotte-25127 Brescia, Italy  
Bank Account : **IBSP IT TM 154 c/c 434**

ICNDT/c AIPND - Via Foresti,5 - 25127 Brescia, Italy  
Phone +39 030 3739 173, Fax +39 030 3739 176,  
E-mail <aipnd@numerica.it>

**The ICNDT Directory on Internet**

With a view to updating the ICNDT Directory, a questionnaire has been circulated by the Secretariat, to the NDT Societies of the world.

Responses have been received from: *Argentina, Australia, Austria, Belarus, Belgium, Bolivia, Brazil, Bulgaria, Canada, Croatia, Czech Rep., Egypt, France, Germany, Greece, Hungary, Ireland, Israel, Japan, New Zealand, Norway, Romania, Russia, Slovakia, Slovenia, South Africa, Spain, Switzerland, The Netherlands, Tunisia, UK, Ukraine, USA, Venezuela, Yugoslavia.*

We would kindly request those countries which have not yet responded, to do so at their earliest convenience.

Questionnaires are available at ICNDT Secretariat e-mail: <aipnd@numerica.it> or fax +39 030 3739176



Mr. Gilbert, INSIGHT editor

*"Help to promote the ICNDT Journal"*

**Errata Slip**

We wish to take this opportunity to correct a printing error made in the previous issue n°3 of ICNDT Journal. We mistakenly ascribed the name of the President of JSNDI to the photo of Dr Mikio Takagi. The photo description should have been as below. We apologise to those concerned and to our readers for any confusion resulting from our error.



Dr Norikazu Ooka  
President of JSNDI



Dr Mikio Takagi  
ISO/TC135 Chairman and former JSNDI President

# THE GLOBAL MUTUAL RECOGNITION

## Certification schemes toward ISO 9712 standard

The main change in ISO 9712 Standard is the move from employer based certification to independent certification through the examination centers authorised by National Certification Body

### SOUTH AFRICA

#### ESTABLISHMENT OF A NATIONAL CERTIFICATION BODY FOR NDT IN THE REPUBLIC OF SOUTH AFRICA

by Mr. Chic Nisbet

All international construction and fabrication codes (ASME, BS, DIN, AD Merkblatt, AWS etc) require that non-destructive (NDT) be performed by certified NDT personnel. The requirements for the certification process of NDT personnel are stipulated in certification codes (EN473, Recommended Practices SNT-TC-1A and ISO 9712 amongst others) ISO 9712: Non-destructive Testing – qualification and certification of personnel – general requirements, has established itself as the code, which is increasingly adopted as the preferred standard internationally.

In standard ISO 9712 it is a requirement that the Certification body, which issues the certification of NDT personnel, is set up and managed along the requirements in Standard EN 45013: Requirements for certification bodies offering certification of personnel (1989).

This standard requires that the certification body be accredited by the Accreditation System operated in the respective country. In South Africa this body is the South African National Accreditation Service (SANAS) which was brought into being by the Department of Trade and Industry (DTI) for accreditation, where this is required by codes and standards.

In the Republic of South Africa (RSA) a system of independent examinations for NDT personnel was formulated in 1984 and since 1985 examinations have been available at the South African Institute of Welding (SAIW). This system, the South African Qualification and Certification Committee (SAQCC) is nominally in line with the requirements of ISO 9712. However, with the revision of ISO 9712 during 1996 and 1997 some aspects, which in the past were quite acceptable and practical, have become much more important. These aspects include:

1. The legal standing of the certification body.
2. Accreditation of the certification body by the National Accreditation System.
3. Certification as a process which addresses training, examination practical experience and physical ability of the personnel,

In order to meet with all the above requirements a national certification body has to be established. Over the past 4 years the South African Institute for Non-Destructive Testing (SAINT) has been endeavouring to establish a certification body that will be recognised in RSA and will also comply with all international requirements which include ISO 9712 and EN 45013. These efforts culminated, with the assistance of the Representative Accreditation Advisory Forum (RAAF) of the DTI and SANAS in a national meeting of industry representatives, including SAINT, Southern Africa ASNT Chapter, SAQCC, SAIW and aerospace industry, being held in October 1997 at the CSIR. At this meeting industry agreed that a South African Certification Body for NDT personnel (SACB NDT) which conforms to the latest international standards was necessary and a steering committee was appointed to establish such a body. Once formed the SACB (NDT) must be accredited by SANAS. The advantage of such a body for the industry in the RSA are obvious. Currently NDT personnel are qualified and certified to a number of different standards, resulting in confusion and in many instances substandard work. Through the SACB (NDT) the NDT industry will be pulled together under one system and conform to a single standard, with regard to qualification and certification of personnel. This will make multiple audits unnecessary, as the SACB (NDT) will have the duty to approve training courses, control examinations and perform surveillance of certificate holders.

#### PROGRESS TO DATE:

The steering committee has been meeting at regular intervals to formulate the modus operandi for the establishment of the certification system. To date the following progress has been made:

- SAINT has made funds available for a quality systems consultant to write the quality manual for the certification body. The final draft has been received and is currently being reviewed.
- A constitution for the certification body has been compiled, outlining the proposed way of operation in the certification body.
- SACB (NDT) has been registered as a Section 21 Company.
- Numerous discussions with the Engineering Council of South Africa (ECSA) have taken place to assure that the certification system will in some shape be recognised by ECSA. ECSA has indicated that they would definitely be willing to be involved in the process of accrediting training courses and centers.
- An agreement has been reached with British Institute for NDT regarding co-operation between the two countries in field of certification. The British system PCN has been accredited by UKAS and their experience will be invaluable to the RSA.
- The committee is presently approaching the DTI and industry for funding in this respect.

**First announcement**  
**SEMINAR ON ISO 9712 Standard**  
to be held in Rome  
during the 15th WCNDT

### JAPAN

From JSNDI President

Dear Dr. Nardoni,  
Thank you for your fax dated August 25, 1999, regarding the ASME recognition of Certification Schemes of NDT Personnel Based on ISO 9712. We are interested in the above recognition and a global mutual recognition of certification schemes of NDT personnel based on ISO 9712. ....We would like to learn the EFNDT position with ASME recognition of EN 473.....



Dr. N. Onaka

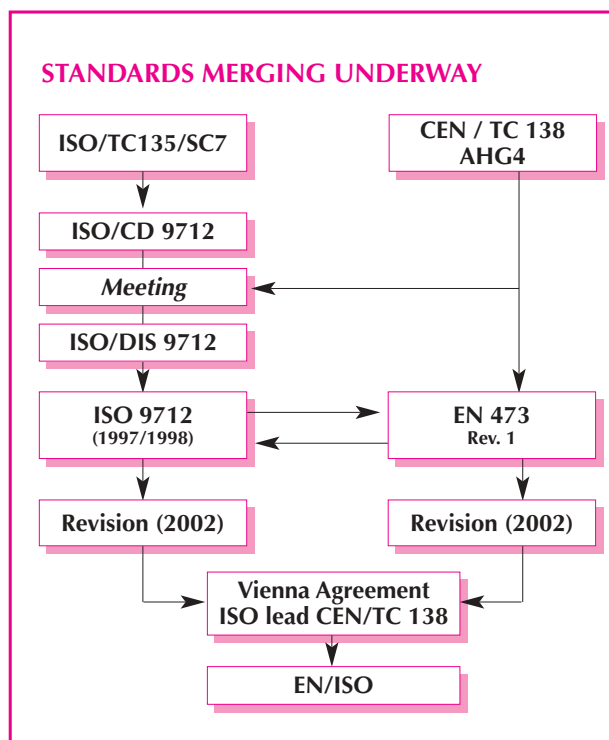
• • •

From Morio Onoe, Prof. Emeritus, University of Tokio

ISO standards are truly global standards, which member countries have to respect and adopt whenever possible. Dr. Farley has repeatedly stated that ISO 9712 and EN 473 shall converge in one standard in the next revision. **ICNDT shall urge member NDT societies to accelerate this process through ISO TC 135/SC 7.** It is noted that the convenor of SC 7/ WG 2 : Qualification and Certification of personnel(Revision of ISO 9712) is ANSL.



Prof. M. Onoe



### USA

#### ASNT Central Certification In The New Millennium\*

by Stephen P. Black

\*Paper presented at 7th CbSNDT Conference on NDT



Stephen P. Black

ASNT has begun several initiatives in its current programs to move forward with the new century. These initiatives were developed to meet the future global demand for safety and human reliability in the nondestructive testing profession. People choose to certify not because it is easy, but because the goal will serve to organise and measure the best of our energies and skills for their respective companies and the industries in which they work. A recent study has determined that in the United States and other parts of the world the most important corporate resource over the next 20 years will be qualified people, more important than capital, strategy or research and development. In the United States over the next 15 years there will be 15% fewer Americans in the 35 to 45 year-old range than there are now. At the same time the US economy is likely to grow at a rate of 3% to 4% per year. This equates to a demand for talent

at an increase of 25% while the supply of qualified people will be a rate of 15%. These statistics will result in the loss of manufacturing jobs in the United States and result in a dependence on imports from China and other countries.

In preparation to permit an equal balance of trade, the Chinese Society for NDT and ASNT have signed a cooperative agreement for ACCP certification. You'll be pleased to know that in July of this year, 10 of your members were certified as ASNT Level III's in Ultrasonic and Radiographic testing.

This certification is recognized by American Society of Mechanical Engineers and demonstrates the very best in personal achievement. This is an important step in the growth of our strategy for worldwide harmonization and a global central certification plan. It also represents a sign of your own society's success in the field of NDT.

Through permission of the Chinese Society, ASNT anticipates the administration of many additional certification exams in the coming years. This is a tribute to the relationship between our two organizations and a milestone in the development of a globally harmonized NDT community.

ASNT regards four very essential elements as necessary for the success of world harmonization in central certification.

- Standardized and controlled difficulty levels of all written examinations and Databases.
- Standardized and controlled difficulty levels of all associated hardware used for the hands on practical examinations.
- Ongoing statistical analysis of examinations and newly created questions.
- Measured levels of difficulty that reflect a performance based criteria.

These are the building blocks of ASNT's Central Certification Program, ACCP. Only when these critical elements are met can the world NDT community be assured of uniform test results.

In the United States these objectives are met by the science of psychometrics. These steps are simple but effective in producing performance-based examinations.

- Produce a body of knowledge by an expert group.
- Body of knowledge is weighted by category of importance.
- Questions are produced to the body of Knowledge.
- Expert group assigns a derived segregation point for pass/fail.
- Statistical analysis is performed on all questions to first establish and then maintain difficulty and discrimination.

The ACCP advantage:

- Offered in RT, UT, PT, MT and VT.
- Fully compliant with ISO 9712
- Recognized by the ASME code in over 62 countries throughout the world.

- Recently adapted by American Petroleum Institute (API 1104)
- Recently adapted by the Civil Aviation Authority of the UK.

Those who prepare for the new millennium by proving that they are the best will assure prosperity. ASNT's Central Certification Program will set world standards for quality and value by fostering a culture of responsibility, trust and high expectations. Regarding membership and sections, ASNT is continuing with the development of programs to promote membership and establish new sections worldwide. As of May 31, 1999, more than 20% of ASNT's membership is comprised of international members. The society currently has 76 sections throughout the US and 12 sections in our global community.

In addition, ASNT will conduct, in the near future, section meetings utilizing the conferencing capabilities of the ASNT web site, [www.asnt.org](http://www.asnt.org). With the advancement in electronic communication, e-mail addresses for interested members will be available for section use. A new member interim report will be available to alert sections in a more timely manner of their new members and other pertinent information. In order to assist international sections in timely receipt of our trade Journal, *Materials Evaluation*, in addition to the current mailing process, an advance copy will be sent via e-mail, for each international section to share with their members until personal copies arrive.

ASNT is responding to the demand of the NDT industry for certification, training and educational materials by introducing several features and programs in the publication arena. The following are some highlights of these programs:

- Interactive computer training utilizing ASNT educational material
- CD-ROM NDT handbook with audio/visual features
- Product and services sales via internet commerce
- Development of ASNT's electronic literature archive for NDT reference searches.

ASNT has also taken initiatives to improve our conferences and promote more topicals and seminars with themes directed to specific industries. We will continue to sponsor and jointly organize such topicals related to the NDT profession across the US and other countries.

Lastly, ASNT continues to improve its information services and capabilities, with services such as:

- Research database searches
- Electronic document delivery
- Book loans and standard information

In closing, let me again acknowledge the importance of the relationship between CHSNDT and ASNT. Through the development of mutually beneficial certification programs, the exchange of NDT information, and our official Agreement for Professional Cooperation, our two societies have built a solid bridge to enhance trade between our two great nations. It is a pleasure to share this important anniversary with such a respected partner in the world of NDT. This is my second trip to China and I again marvel at the beauty of this vast country, but most of all I will remember your courtesy and your warmth. Thank you so much for allowing me to share ASNT's vision. May the sun always shine on the Chinese Society for NDT.