



*The World Organisation for NDT*

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### CHAIRMAN'S MESSAGE

## Action plans provide direction for work

I am writing this in the run-up to our 34th ICNDT meeting to be held in Moscow during the 10th European Conference on NDT. This will be the latest meeting of the International Committee in a series which goes back to a meeting fifty-five years ago in Brussels in 1955. The NDT communities of just fourteen countries were represented at the first formal meeting fifty years ago in Japan in 1960. Now, NDT societies from more than 50 countries are members of ICNDT.

The Committee has moved forward from the years when its main task was to organise the World Conference to now when the ICNDT is an established legal entity, registered in Vienna, like many larger international bodies. The body has been funded in recent years by donations from the NDT societies which have hosted the World Conferences (Italy, Canada and China). In Moscow, the General Assembly will vote on a proposal to introduce modest annual fees to help meet our administrative expenses. Other support is provided 'in-kind' by some of the larger NDT societies – Canada and Britain support the preparation of the Journal and other publications, Germany hosts the ICNDT website, Britain provides the ICNDT secretariat and India will fund the preparation of ICNDT Monographs.



Also at the 34th meeting the members will review ICNDT's Strategic Plan, prepared by the Executive Committee to provide direction for our work. The Strategic Plan has been published on the ICNDT website ([www.icndt.org](http://www.icndt.org)). Four Action Plans have been created:

- (i) Support for national NDT societies;
- (ii) Promotion of the importance of NDT;
- (iii) Qualification and certification of NDT personnel;
- (iv) NDT education and research.

Four Working Groups are tasked with pursuing these Action Plans.

Elsewhere in this *ICNDT Journal* you will find an invitation to volunteer your assistance to help promote the importance of NDT (Wikipedia action – opposite) and an article by Matt Gallagher on The British Institute of NDT's integrated education programme for NDT professionals. This is associated with the tasks of Working Group 4: Education and Research.

At the Moscow meeting we will receive a progress report from the Joint Working Group of ICNDT TC 135 and CEN TC 138 – set up with the objective of harmonising the ISO 9712 and EN 473 standards. We will also discuss the NDT projects which are supported by the IAEA and consider if ICNDT can help the IAEA deliver its objectives.

Finally, I offer a big thank you to the organisers of the 10th ECNDT in Moscow and all of the people and organisations from inside Russia and outside who have supported the event.

Dr J M Farley  
Chairman, ICNDT

## Help promote the importance of NDT

In its quest to improve and increase the promotion of the importance of NDT, the Executive Committee of ICNDT has formulated Action Plan 2, which covers a wide variety of issues relating to the objective. One of these topics is concerned with the information available on the internet on NDT and its associated disciplines, and NDT technologies and their application. It is obviously in everyone's interest that this information is as comprehensive, accurate and up-to-date as possible.

Websites such as Wikipedia, the encyclopaedia written collaboratively by the people who use it, contain a lot of information about non-destructive testing that can be improved, developed and expanded. Not everyone, however, has the expertise or the time available to do these things.

It is felt that ICNDT can fulfill a useful role by helping to co-ordinate the efforts of individuals who are willing to contribute a small but valuable amount of time to enhancing the NDT information resources available on the internet. These resources might be not just those available through websites such as Wikipedia, but also many others, including the ICNDT's own at [www.icndt.org](http://www.icndt.org), with a view to making this a valuable knowledge base for all people with an interest in non-destructive testing.

Whilst initial efforts will be focused on the English-language versions of the resources in question, it is ultimately envisaged that other languages will be covered in the future.

It is hoped to convene a meeting of interested communications representatives from member societies in due course.

To register your interest in joining a small task group and offering assistance with this project, please send an email to [david.gilbert@bindt.org](mailto:david.gilbert@bindt.org), detailing any specific areas of interest and expertise.



## ICNDT Journal



**Publisher:** The International Committee for Non-Destructive Testing (ICNDT)  
Secretariat: The British Institute of Non-Destructive Testing (BINDT),  
1 Spencer Parade, Northampton NN1 5AA, UK. Tel: +44 (0)1604 630124;  
Fax: +44 (0)1604 231489; Email: info@bindt.org

**Editor:** Douglas J Marshall, The Canadian Institute for NDE (CINDE), 135 Fennell  
Avenue, Hamilton, Ontario L8N 3T2, Canada. Tel: +1 (905) 387-1655; Fax:  
+1 (905) 574-6080; Email: d.marshall@cinde.ca

**Production Editors:** David Gilbert, The British Institute of Non-Destructive Testing (BINDT).  
Tel: +44 1604 630124; Fax: +44 1604 231489; Email: david.gilbert@  
bindt.org

Sharon Bond, CINDE  
Email: s.bond@cinde.ca

**Production:** Corinne Mackle, BINDT

Published three times per year.

Editorial contributions are welcomed.

Articles should be sent to Sharon Bond, CINDE. Email: s.bond@cinde.ca

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Journal is available  
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www.icndt.org

## Future ICNDT Committee Meetings

### Executive

**Sun 6 Jun 2010:** Moscow  
**Fri 9 Jul 2010:** Teleconference  
**Fri 24 Sep 2010:** Teleconference  
**Fri 3 Dec 2010:** Teleconference  
**Thu/Fri 27/28 Jan 2011:** Glasgow  
**Fri 4 Mar 2011:** Teleconference

### General Assembly

**Thu 10 Jun 2010:** Moscow

### PGP

**Sat 13 Nov 2010:** Houston  
**Sat 1 Oct 2011:** Cancun

### Working Group 1

**Sat/Sun 11/12 Sep 2010:** Vienna  
**Sun 14 Nov 2010:** Houston  
**Sun 2 Oct 2011:** Cancun

**The next ICNDT Journal will be published in September 2010**  
**Material should be sent to Sharon Bond, email: s.bond@cinde.ca by 31 July 2010**

## ISO CASCO WG30 and ISO/IEC 17024

Report from John Thompson, Chairman,  
ICNDT WG1

CASCO Working Group (WG) 30 is currently revising ISO/IEC 17024:2003 Conformity assessment – General requirements for bodies operating certification of persons. This standard is a normative reference in both EN 473:2008 and ISO 9712:2005, and NDT personnel certification bodies must conform to the requirements of ISO/IEC 17024. John Thompson is the formally appointed liaison between this WG and ISO TC135, the Technical Committee for ISO 9712.

### Documents reviewed or referred to at the meeting:

1. ISO/IEC 17024 WD2
2. CASCO WG30/12 (WG30 comments on WD2)
3. WG30 Work Plan.

### Meeting report:

The meeting took place in Geneva over three days, 22 to 24 February 2010.

The Chairperson appointed leaders for four break-out groups, assigning sections of the standard for review by each group in order to facilitate the review of WG30 comments on the current WD2 ISO-IEC-17024. On the afternoon of Tuesday 23 February, the meeting re-convened in plenary session to discuss significant items of change or contentiousness.

The Chairperson led a review of the WG30 work plan. It was recognised that the present plan was unrealistic since it was felt that a further working draft (WD3), reflecting agreement at the present meeting, should be produced, circulated and commented upon in time for a further meeting on 22-24 June 2010, at which it was expected to finalise a CD for circulation and comment, with further comments reviewed at a meeting on 18-20 January 2011. A two-day work group meeting would then review comments from the CD ballot, producing a DIS around June 2011.

**Reporter's opinion:** Given the DIS and FDIS ballot periods, it is not anticipated that the next edition would be published before 2012, probably in the middle of that year (hopefully in time for the WCNDT in Durban, when its impact can be considered during the ISO TC135 meeting).

### Significant and/or contentious matters noted:

At the 23 February plenary session, the following were discussed at length:

- CB certification of own staff (presently allowed if no equivalent certification available in that country); agreed at present meeting to remove the foregoing condition, but with anticipation that this would result in serious concerns being expressed during the next comment period. This arose from discussion

concerning practice, prevalent in the USA, whereby major multi-nationals (such as Microsoft and Cisco) own and administer certification schemes for persons using and maintaining their products, including own staff or employees.

- Independence and impartiality conditions (which could result in difficulty for membership bodies, such as NDT societies, separating normal services to members from certification of members).
- Carrying out and documenting a periodic (annual?) system or practice analysis (a defined term), even when the scheme is defined by an international or regional standard (such as ISO 9712).
- Requirement for applicants for assessment/examination to sign a non-disclosure agreement with the CB (to preserve the security of examination material).

**Date and place of the next meeting:** 22-24 June 2010, at the ISO offices in Geneva.

**Footnote:** The next meeting of the combined CEN/ISO WG jointly reviewing and revising EN 473:2008 and ISO 9712:2005 will take place in Vienna on Monday 13 September 2010, and not in Moscow prior to the 10th ECNDT as stated in the March issue of the ICNDT Journal.

# An integrated education programme for NDT professionals

Report from Matt Gallagher, The British Institute of NDT

The British Institute of Non-Destructive Testing (BINDT) has embarked on an ambitious programme to develop an improved approach to the professional development of NDT technicians and engineers. It incorporates vocational training, work-based learning, personnel certification, academic awards, professional engineer registration and ongoing learning provision.

The programme was launched in the UK in 2007 to address a number of issues:

- NDT is not always perceived as a 'proper' engineering discipline
- NDT certification is not fully recognised in the wider professional community
- Certification does not confer professional status and is in itself a temporary qualification
- There is no structured career development for NDT technicians
- The demographic issue – not enough new entrants into NDT
- There is no structured entry route for school leavers.

Key elements of the programme include:

- **Distance learning options**  
The new NDT degree programmes are delivered by distance learning. This provides substantial flexibility and enables students to study at any location with internet access. Currently, there are students working towards a degree whilst offshore or overseas. For new entrants into the profession, distance learning means that they can be employed whilst studying – which means that they are not building up student debts and are able to gain valuable work experience.
- **Variety of routes into the programme**  
There are various entry routes into the programme. School leavers will need university level entry qualifications. Those with NDT certification can gain entry without meeting academic prerequisites. Certification also earns exemptions from some modules through accreditation of prior learning (APL).

The main purpose of the programme is to provide an integrated, flexible professional development path for NDT professionals – linking work-based learning, apprenticeships and CPD with vocational qualifications (certification), academic awards and professional engineer registration.

The qualification matrix provides a graphical illustration of a flexible programme where equivalences, exemption routes and different entry points are provided. The aim is that no-one with the necessary ambition is excluded. Entrants can come straight from school with A-level qualifications or through the vocational route with PCN certification at Levels 1, 2 or 3.

## Non-destructive testing degree programmes

The Foundation Degree in NDT (FdScNDT) was validated in July 2007. At the beginning of 2010 there were around 120 students studying towards the degree. The programme is delivered through a combination of work-based and distance learning.

Currently, all students are existing NDT personnel who see the degree as an opportunity for professional development. In the longer term, most students will be school leavers.

Entrants who have held certification in NDT are granted appropriate accreditation of prior learning (APL), which means that they can be exempted from some of the Stage 1 and Stage 2 modules.

During 2009, the BSc(Hons) NDT degree was validated. This provides a route to a Bachelor level engineering qualification.

FdSc(NDT) graduates are eligible to enter the BSc(Hons)

WORK-BASED	VOCATIONAL	ACADEMIC	PROF REG	NQF EQUIVALENT
APPRENTICESHIPS WORK-BASED LEARNING CPD		Engineering Doctorate		8
		Masters Degree	Chartered Engineer	7
		BSc(Hons) NDT		6
	PCN Level 3	Foundation Degree Stage 2	Incorporated Engineer	5
	PCN Level 2 PCN Level 1	Foundation Degree Stage 1	Engineering Technician	4 3
SCHOOL LEAVER OR OTHER ENTRY LEVEL				

Figure 1. NDT professional development qualification matrix

NDT top-up programme. Candidates with PCN or ASNT Level 3 certification in four appropriate methods may be granted direct entry into the BSc(Hons) NDT programme.

## NDT degree programme content

The Foundation Degree in NDT (FdScNDT) is equivalent to two-thirds of a full bachelor degree. By distance learning, students without any accreditation of prior learning (APL) would typically take four years to complete the degree. The programme is split into two stages comprising:

### Stage 1:

- Introduction to NDT 20
  - Material Properties 20
  - Electronic Principles 20
  - Mathematics for Technology Part 1 20
  - Technical Project 20
  - Personal Development 20
- Total Credit Points = 120

### Stage 2:

- Visual and Surface Testing 20
  - Radiographic Testing 20
  - Ultrasonic Testing 20
  - Eddy Current Testing 20
  - Quality Management of NDT 20
  - Quality Tools and Techniques in NDT 20
- Total Credit Points = 120

The top-up BSc(Hons) NDT would typically take two years and consists of the following modules:

- Corrosion Analysis 20
  - Thermographic Imaging 20
  - Vibration Monitoring and Analysis 20
  - Advanced Inspection Methods and Techniques 20
  - Technology Project 40
- Total Credit Points = 120

## The student experience

Student life is quite different from the conventional campus experience. Students are generally employed and student debt is less of an issue.

The integrated nature of the programme means that students will gain academic qualifications, alongside vocational certification and engineer registration.

School leavers will be attracted to a learning experience which combines academic and work-based learning. A successful student embarking on the programme at age 18 could have achieved, after four years, a Foundation Degree in Non-Destructive Testing, PCN Level 3 in UT, RT, PT, MT and ET as well as Engineering Technician registration and four years' work experience.

Progression to the BSc(Hons) NDT, Masters Degree and an Engineering Doctorate in NDT is available to those with the necessary ability and aspiration.

### Partnership with industry

A key element for attracting school leavers into an NDT training and education programme is the availability of work placements. The British Institute of NDT is encouraging UK industry to offer suitable placements. We have created a new staff position, Associate Director of Industry, Education & Professional Affairs, to help facilitate this.

The Institute is also considering establishing a bursary for selected trainees.

### Continuing professional development

Another important element of the programme is high-quality material for continuing professional development (CPD).

Flexible delivery provides a variety of access points, online or through lectures in different locations. Material will be produced from accredited texts, including published papers on the most recent developments.

Those registered for the CPD programme will be provided with their own web space within the Institute's website. This can be used for logging CPD and work experience. The CPD programme will be designed to satisfy ongoing professional registration requirements as well as certification renewal.

### Planned new features of the programme

Currently, the academic programme provided by the University of Northampton allows exemptions to students holding PCN/EN473 certification. A possibility for the future is the recognition of appropriate academic awards within an EN473 structure.

The equivalence already established, and illustrated in the Tables in this paper, for vocational qualifications, academic awards and professional registration could logically be extended to include a new Level 4 certification pathway to engineer level competency.

The technical scope of the Foundation and BSc degrees is likely to broaden which will lead to awards in related inspection and test disciplines such as condition monitoring.

## The Value of NDT – articles invited

The International Committee for Non-Destructive Testing is inviting editorial contributions for the *ICNDT Journal* by means of an award for the best published case study expounding the value of NDT.

The case studies should describe a real-life installation or application, detail problems and challenges encountered and how they were solved and, ideally, state the amount of money saved as well as explain any additional benefits or advantages that resulted from the employment of NDT or condition monitoring equipment, systems, techniques and/or services.

A good example of the type of article sought is one published in *Insight* December 2009: 'Intelligent gearbox monitoring system allows Corus to reduce costly downtime' (Vol 51, No 12, p 649).

The article described how the unique PRAXIS condition monitoring partnership between CNES and Schaeffler UK has enabled plant engineers at the beam mill in Lackenby, Teesside, UK, to oversee an internal redesign to the hot saws gearbox, which has ultimately saved the company more than £100,000.

WORK/ CLASSROOM- BASED	VOCATIONAL	ACADEMIC	PROF REG	NQF EQUIVALENT
ACCREDITED TRAINING MODULES CPD APPRENTICESHIPS WORK-BASED LEARNING		Engineering Doctorate		8
		Masters Degree	Chartered Engineer	7
	Level 4 NDT Engineer	BSc(Hons) NDT/CM/ ITT		6
	PCN Level 3	Foundation Degree Stage 2	Incorporated Engineer	5
	PCN Level 2 PCN Level 1	Foundation Degree Stage 1	Engineering Technician	4
SCHOOL LEAVER OR OTHER ENTRY LEVEL				

**Figure 2. Inspection and test technologies professional development qualification matrix**

These developments would lead to the next evolution of the professional development qualification matrix.

### Conclusion

The British Institute of NDT is making good progress with its new education initiative for NDT professionals. There are currently around 120 students on the distance learning degree programmes – this is before any full promotional launch. Plans for the future recognise industry's need for integrated inspection and test provision.

Developing high-quality material for continuing professional development will help ensure NDT professionals remain at the forefront.

Recognising the overlaps in academic and vocational training leads to possibilities of mutual recognition and exemption pathways.

Flexible delivery whilst maintaining quality makes the programme attractive and accessible.

At The British Institute of NDT we are happy to share our experiences with sister societies and international groups such as EFNDT and ICNDT. Contact [matt.gallagher@bindt.org](mailto:matt.gallagher@bindt.org) for more information.



# 18<sup>TH</sup> WCNDT

DURBAN · SOUTH AFRICA · 2012

World Conference on Non Destructive Testing



THEME

**NDT IN SERVICE OF SOCIETY -**  
in safety assurance, quality control and condition monitoring.

**16 - 20 April 2012**  
**International Convention Centre, Durban, South Africa**



**Contact Details:**

Local Conference Secretariat  
The Conference Company, South Africa  
Tel: + 27 31 303 9852 Fax: + 27 31 303 9529  
Nina Freysen-Pretorius / Deidre Hancke-Haysom  
nina@confco.co.za / deidre@confco.co.za

**Conference Website:** [www.wcndt2012.org.za](http://www.wcndt2012.org.za)

## AFRICA

## CETIME Tunisia – a model of adaptation to industrial changes

CETIME is an organisation providing support and services to the Tunisian Mechanical and Electrical Industry (MEI). During recent years, it has shown remarkable dynamism that accounts for its rank as a model among other similar organisations. This position was achieved thanks to its pragmatic strategy based on satisfying customers' needs, on the efficient management of different organisational parameters, good communication and human resources management. Actually, these practices are inherent to good management and constitute the pillar of the managerial strategy of the centre.

The positive results of the effective managerial strategy of the centre have soon become apparent. Both the ratios and the indicators of performance recorded during recent years do prove success. This can be perceived in a net surplus at the level of turnover and achievements, which brought high product development exceeding costs through services provided.

These results could not be reached without the adequate combination of several factors. Among these, the most important ones are:

### 1. Culture

The setting of an organisational step orientated towards 'the heart of the job' in the sector of MEI, that is to say mechanics, electricity and electronics, revolving around the main activity of the centre (materials, control and measuring). This organisational approach has been realised through the adoption of an enterprise culture based on 'project management', through the organisation of a dynamic group and the engagement of efficiencies in the common projects and by introducing the missions of project coordinators. It should also be noted that the rate of technical staff at the CETIME amounts to 70% of a total of 115 people.

### 2. Quality

The increase of quality management within the centre by its shift towards an integrated system 'QSE'. This involves the reinforcement of the accreditation of its laboratories in order to enable them to provide different services necessary for the development of Tunisian industrial performances. Quality has always been the core of the managerial strategy of the centre. The latter has always been a niche for skills and an ideal model of management covering all the prerequisites of entrepreneurship, namely: leadership, strategy, management of human resources, internal and external communication processes etc, in addition to high consideration for social and environmental matters. Thus, the CETIME did engage itself in an action of setting

a system of environmental management together with health and labour security. These steps were taken in order to complete its SMQ and to consolidate its quality infrastructure in terms of control and tests. This enabled the centre to cover the increasing enterprises' demands arising from the liberalisation of international trade, especially with UE. Thus, the centre continuously commits itself to enlarging the accreditation of its laboratories.

The CETIME has also been designated, since 2001, as a model regional centre for training and granting degrees to technical staff working in the field of non-destructive testing (NDT) in the French-speaking African countries. This designation was attributed by the International Atomic Energy Agency (IAEA) in the context of the 'AFRA' programme.

This unit has undertaken the responsibility of training and granting degrees in the different basic methods of non-destructive testing and according to international standards (ISO 9712, EN 473 and IAE TEC – DOC 673). So far, it has granted degrees to more than 500 operators, including a hundred from French-speaking African countries.

### 3. Communications

Being essential for the building of the society of knowledge and for the concretisation of new projects of high quality added to the Tunisian industry, the CETIME has committed itself to the control of internal information and its dissemination. A documentation centre of up-to-date technology (DCUT) has been created which provides a rich document database and easy access to national and international databases.

In order to benefit with technical information and communication, a dynamic website ([www.cetime.ind.tn](http://www.cetime.ind.tn)) was created. At the same time, a free hotline offering quick effective assistance services (QAS) was also set up.

To help industrial enterprises in their search for modern tools of production and management, the CETIME has provided the MEI,



Visit of Mr Ali Boussaha, Director of the Africa section of the International Atomic Energy Agency (IAEA), to CETIME



An official ceremony dedicated to giving NDT Level III certificates by Mr Ridha Ben Mosbah, State Secretary for Industry & Energy and PME, July 2006



ever since 2005, with a bulletin of information, *CETIME news*. This electronic monthly review provides enterprises with up-to-date technological news and helps them seize business opportunities that might crop up in a challenging economic world.

In order to bring efficient contribution to the national research system, the centre works in tight collaboration with Sousse, l'ANPRI, research centres, universities and sectoral professional organisations. This collaboration allows edifying new innovative research projects allowing the industrial sector to be strongly involved in different programmes, and enabling enterprises to obtain a better international rank.

#### 4. Image

By celebrating its 25th anniversary in May 2007, CETIME has achieved a quarter of a century of support to Tunisian industry, acquiring remarkable expertise and reputation.

Thanks to its experience and brand image acquired throughout several years of work, CETIME has invested in research and development. Two major events have largely contributed to the strengthening of the brand image:

- The organisation of the 5th African Conference on NDT held from 12 to 14 March 2008 in Hammamet-Tunisia. In the context of collaboration between the African Federation of NDT (AFNDT) and the International Agency of Atomic Energy (IAAE) and through the regional project of AFRA, this event has constituted an important forum at the level of the African continent.
- The membership of CETIME in the International Institute of Welding (IIW) since July 2007 and its positive impact on the development of Tunisian skills in the field of welding and related techniques. Tunisia was selected by the IIW to host and organise the international congress of welding and of related techniques from 26 to 28 May 2010.

New laboratories dedicated to future projects such as: photovoltaics, tests of electromagnetic compatibility (EMC), mechatronics and on-board systems are considered positive assets for the adoption of a dynamic direction necessary for the policy of setting an efficient industrial strategy in the year 2016.

There is also international cooperation with France, Spain, Italy, Sweden and so on, together with the multi and bilateral partnership, especially the one that CETIME has made with CETIM – FRANCE.

### 1st Call for Papers

## Online Workshop: Simulation in NDT 2010

*September 2010 in NDT.net*

The workshop will take place online in NDT.net during the whole month of September.

Modelling and simulation of NDT techniques is the main emphasis of this workshop.

Simulation or modelling has been a part of NDT since its earliest applications. It has been used for several of the common NDT methods including radiography, ultrasonics, eddy current, remote field and a variety of others. Modelling has been available to a variety of industrial venues but seems to have been under-utilised in the general NDT service industry, thus this workshop wants to bring together research, providers and NDT practitioners.

The format of presentations is open to a wide range of options, such as MS Word manuscripts (we will convert these to PDF) and Powerpoints, which can also contain supplements such as videos or even audio comments by the author. The workshop with its presentation will be displayed in the database. In conjunction with the presentations, a virtual meeting room will be open in the forum for asking questions of the presenters or discussions between participants.

The workshop is freely accessible for all without further registration.

Presenters can register online and upload contributions at: [www.ndt.net/simNDT2010](http://www.ndt.net/simNDT2010)

#### Deadlines

*Abstract:* 15 July 2010

*Final Paper:* 1 August 2010

*Workshop Editor:* Rolf Diederichs (NDT.net, Germany).

*Programme Chairman:* Ed Ginzel (Materials Research Institute, Canada).

*Contact:* Rolf Diederichs. Email: [rd@ndt.net](mailto:rd@ndt.net)

## 9th World Conference on Neutron Radiography WCNR-9

*3-8 October 2010*

*Kwa Maritane, South Africa*

This is the 9th conference in the series of World Conferences for Neutron Radiography (WCNR-9), that has been scheduled by the International Society for Neutron Radiology (ISNR) to take place every 4 years since 1981, when WCNR-1 was held in San Diego, USA.

This is the first opportunity for the event to be held on the African continent with South Africa as the nominated host.

The aim of the series of WCNR is to bring researchers, students and fellows together to share information, build networks and to strengthen relationships between international partners in neutron radiography-related research.

Topics to be covered at WCNR-9:

- Neutron sources and beams at fast, thermal and cold neutron facilities.
- Neutron detectors and techniques for tomographic, phase, stroboscopic and other novel imaging practices.
- Industrial neutron imaging applications and its complementary nature to X-ray imaging.

Tucked away in the heart of the malaria-free Pilanesberg National Park, about 80 km north of Pretoria, Kwa Maritane Bush Lodge offers a unique combination of African wildlife setting, including an abundance of Big Five game viewing opportunities, and productive conferencing.

A scientific visit is also planned to the thermal and fast neutron radiography facilities at Necea, located 40 km west of Pretoria.

*Contact:* Global Conferences Africa, PO Box 651817, Benmore, 2010, South Africa. Tel: +27 (0)11 676 3453; Fax: +27 (0)11 884 1502; Email: [wcnr-9@globalconf.co.za](mailto:wcnr-9@globalconf.co.za); Web: [www.wcnr-9.co.za](http://www.wcnr-9.co.za) / [www.isnr.de](http://www.isnr.de)

## ASIA-PACIFIC

## Additional report on the 13th Asia-Pacific Conference for Non-Destructive Testing (APCNDT 2009)

The APCNDT 2009 was held at Pacifico Yokohama, Yokohama, Japan, from 8 to 13 November 2009. It was the third time in Japan after an interval of 29 years.

Dr M Farley, President of ICNDT, and Dr N Ooka, Chairman of APCNDT 2009, opened the conference.



Attendees of the ICNDT Policy and General Purposes Committee (PGPC) meeting held on 8 November 2009

There were 212 abstracts in the original programme, of which 178 presentations, including 4 plenary lectures, were made. The number of participants was 331, including exhibitors from 35 nations, despite the economic crisis and the H1N1 virus going around the world. 27 delegates and 21 delegates attended the APCNDT meetings on 11 and 12 November, respectively.

The next APCNDT will be held at Mumbai, India, in November 2013.



Attendees at the APCNDT meeting on 12 November 2009



Dr N Ooka, Chairman of APCNDT 2009 (centre) with Dr B Venkatraman, Representative of APCNDT 2013 (left) and Mr L Dick, Former President of APCNDT 2006

## The Workshop on NDT in JSNDI

The Japanese Society for Non-Destructive Inspection (JSNDI) has been planning contributions to Asia-Pacific societies for promoting NDT technologies from the twenty-first century onwards. The International Atomic Energy Agency (IAEA) had been promoting NDT industrial application among the east Asian countries in the last century. The future planning committee in JSNDI took up this matter and planned to hold a workshop as one of its most important subjects for the purpose.

JSNDI held the first workshop on NDT for enhancement of cooperation with Asia-Pacific societies for three days at the JSNDI office in Tokyo from 5 to 7 November 2007. A number of resolutions were adopted at the end of this workshop. The workshop concluded with great mutual understanding among the participating societies for this initiative.

The second workshop on NDT with Asia-Pacific societies was held from 13 to 15 November 2008, with the aim of cooperation among Asia-Pacific societies. 17 participants from 13 societies attended this workshop, and the workshop attendees were different from the first workshop. The working group in JSNDI studied the possibility of the realisation of the following recommendations, taking into account the relationship to APCNDT, ICNDT and IAEA:

- (1) Exchange of information.
- (2) Compilation of a question bank for qualification examination, including test-pieces.
- (3) Establishment of a unified qualification & certification scheme.
- (4) Common activity for the implementation of a model Quality Management System (QMS) in accordance with ISO 17024.
- (5) Establishment of an organisation of the Federation of Asian NDT societies (draft of FANDT).

The third workshop on NDT was held during the APCNDT 2009 Conference from 9 to 11 November 2009. Attending were not only workshop members, but also observers from ASNT, AINDT, NZNDTA and ICNDT. At the workshop, JSNDI proposed the following activities as a second stage:

- (1) Continue the workshop under the support of JSNDI to encourage qualification examination, education and training of NDT personnel.
- (2) Arrange or establish the question bank for qualification examination in cooperation with participating countries.
- (3) Perform the technical training and fabrication of test-pieces.
- (4) Exchange technical information.
- (5) Study the scheme to foster NDT personnel in order to unify and enhance the level of NDT techniques.



Attendees of the Third Workshop on NDT in Yokohama, Japan

Now, JSNDI are planning to have a task group meeting in November 2010 and education & training of NDT personnel in February 2011. Further information will be found on the JSNDI website: [http://www.jsndi.jp/english\\_pages\\_web/index.html](http://www.jsndi.jp/english_pages_web/index.html)

# 10<sup>TH</sup> ECNDT

Moscow 2010, June 7-11



**EF** European Federation for  
Non-Destructive Testing  
**NDT**



Russian Society for  
Non-Destructive  
Testing and Technical  
Diagnostics (RSNTTD)

## 10<sup>th</sup> European Conference and Exhibition on NDT

*708 papers from 64 countries submitted for participation.  
The largest exhibition on technical diagnostics equipment.*

### **Sections:**

*Technogenic diagnostics  
Anti-terrorist diagnostics  
Ecological diagnostics  
Standardization, certification, operational risks*

### **Venue:**

*Moscow, Expocentre, 14 Krasnopresnenskaya nab.*

### **Secretariat:**

*119048, Moscow, 1 Usacheva str. Bld. 1  
Tel: +7 (499) 246 7132  
Fax: +7 (499) 246 7132 / 246 8888  
e-mail: [info@ecndt2010.ru](mailto:info@ecndt2010.ru) , Homepage: [www.ecndt2010.ru](http://www.ecndt2010.ru)*

**NDT - basis of safety**

## PAN-AMERICA

## News from the American Society for NDT

*Houston is It***Houston, Texas, USA, is site for ASNT's 2010 Fall Conference & Quality Testing Show**

The annual Fall Conference that combines innovative technology and applications with knowledgeable people will be held in Houston, Texas, USA. Houston was host to ASNT's very popular 2006 Fall Conference. ASNT's Houston Section is again looking forward to welcoming the global NDT community. Some very special activities are being planned for conference participants, including a rodeo. The 2010 conference, *Houston is It*, is scheduled for 15-19 November 2010.

The Quality Testing Show will bring NDT equipment and service providers from around the world together for an energetic and vibrant tradeshow. Both the conference and exhibition will be held at the George R Brown Convention Center.

The professional programme is intended to be robust, with papers presented on a variety of NDT techniques and applications, to bring participants up to date on the very latest in the NDT field. Depending on the date of this publication's release, there may still be an opportunity to submit abstracts for consideration for the Fall Conference. Desired topics include health monitoring, infrastructure, laser methods, phased array, radiation safety, homeland security, composites, pipeline inspection, aerospace, manufacturing and reliability studies.

Submission information and requirements are provided on the ASNT website ([www.asnt.org](http://www.asnt.org)). From the homepage, click on the 'Meetings and Events' link and select the Fall Conference. Short courses, public lectures and committee meetings are also planned for the week.

**Williamsburg proved successful venue for the 19th Annual Research Symposium and Spring Conference**

Historic Williamsburg, Virginia, USA, was the location for the ASNT 19th Annual Research Symposium & Spring Conference.

The four-day event, held 22-26 March 2010, opened with Monday evening's welcome reception sponsored by exhibiting companies. Tuesday's sessions began with a special keynote address: 'Impacting NDT's Future: the Pioneering Work of Professor Robert Green while at the Johns Hopkins University Center for NDE', which was presented by his former academic colleague Dr B Boro Djordjevic. Djordjevic, who is President of Materials and Sensors Technologies, set the tone for a day filled with sessions presented by Green's former students. The topics, ranging from 'Ultrasonic Measurement of Hertzian Contact' to 'Thermographic Images of Defects in Concrete Bridges' and 'NDE Engineering: The Missing Link between Design and Maintenance', demonstrated further Green's legacy in non-destructive testing evaluation research. More than 400 people attended the symposium, which included 78 paper presentations and 28 vendor exhibitors displaying the latest in NDT/NDE equipment and research orientated services.

It's not too soon to consider submitting an abstract for the 20th Annual Research Symposium & Spring Conference, set for 21-25 March 2011, in San Francisco, California, USA. Watch the ASNT website ([www.asnt.org](http://www.asnt.org)) for abstract submission requirements and deadlines.

**ASNT membership growth continues**

ASNT membership now includes over 11,000 individual members and 500 corporate partners – the largest number of corporate partners in the Society's history. The membership is active around the world, with 70 domestic sections and 14 located outside the United States. The Society's growth worldwide is striking, with 38% of the total membership residing outside the United States.

**Topical conferences scheduled for summer 2010**

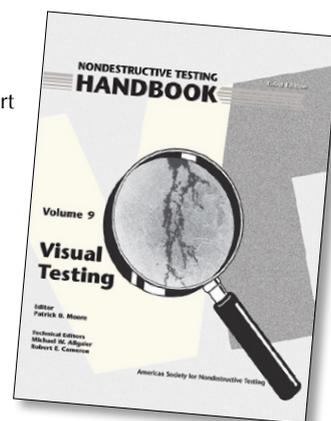
Additional topic and industry specific courses planned for this summer include:

- **The Fourth Japan-US Symposium on Emerging NDE Capabilities for a Safer World** offers a special opportunity to attend a cooperative symposium which fosters interactions among researchers, scientists, engineers and practitioners from Japan and the USA. The Japanese Society for Non-Destructive Inspection (JSNDI) is hosting this conference. Further details regarding the conference, including exhibiting opportunities, hotel accommodation, registration fees/forms and the full schedule of events, can be found on JSNDI's website at [http://www.jsndi.jp/english\\_pages\\_web/index\\_1\\_1.html](http://www.jsndi.jp/english_pages_web/index_1_1.html)
- **Digital Imaging XIII**, at the Foxwoods Resort, Mashantucket, Connecticut, USA, emphasises the important role of, and challenges to, non-destructive testing for new construction and in-service inspection of the real-time radiography and digital imaging industry. The programme details are available online at <http://www.asnt.org/events/conferences/digital/digital.htm>
- **NDE/NDT for Highways and Bridges: Structural Materials Technology (SMT) 2010** is being held 16-20 August 2010 at New York's LaGuardia Airport Marriott, New York, New York, USA. This conference promotes the exchange of information among national and international researchers, practitioners and infrastructure stakeholders on the application of NDE and NDT technologies for condition assessment of highway infrastructure. Contributions are focused on field applications, case studies, technology implementation, applied research and practical experience. Infrastructure stakeholders, transportation officials, researchers, consultants and contractors will be exposed to the state-of-the-practice in NDE methods. In addition, participants will have opportunities to discuss urgent problems faced by civil infrastructure stakeholders and the potential solutions utilising available and emerging NDE technologies.

***Nondestructive Testing Handbook, third edition: Volume 9, Visual Testing published***

When describing the recently published Visual Testing NDT Handbook, editor Patrick Moore writes in the preface: "Unlike the prior edition or any book on visual testing, this comprehensive volume covers digital capabilities that inspectors use routinely. The coverage of indirect techniques (sometimes called remote inspection) has been updated to reflect current technology for cameras and measurement. The discussions of optometry and physics are updated. The chapter on metals is completely revised with an eye for practicality. The material on direct techniques is presented in one chapter...The entire book has been revised to be clearly organised and functionally complete". This volume features 340 pages, 459 illustrations, 67 equations and 50 tables. Other notable highlights of the NDT Handbook are that it:

- is a collaborative effort of dozens of NDT experts including technical editors Michael W Allgaier and Robert E Cameron;
- has an editorial emphasis on practicality, with information for Level II and Level III inspectors;
- includes applications for welding, chemical, petroleum, electric power, aerospace;
- covers updated standards;
- includes image processing;
- has metric units throughout.



## News from the Brazilian Association of NDT

### ABENDI takes part in 9th Meeting on Improving the Certification Process

The Brazilian Technical Standards Association (ABNT) – jointly with the Brazilian Committee on Quality (CB-25) – held the 9th Meeting on Improving the Certification Process in the Brazilian System of Compliance Assessment (SBAC) on 22-23 March at the Hotel Estanzola Paulista. The event gathered government agencies, entities, companies and other organisations related to the process of compliance assessment to discuss issues that lead to actions aimed at improving the certification process in the scope of the SBAC.

Participants at the event included: João Rufino Telles Filho, Executive Manager of the RAC (Registry of Certified Auditors), which is currently operated by ABENDI; Alfredo Lobo, the Quality Director at Inmetro; and Dr Nigel Croft, Brazil's representative at the ISO/TC 176 (the ISO's Technical Committee responsible for 9000-series standards), who was recently elected as Chairman of the ISO/TC 176/SC 2 Subcommittee.

### ABENDI organises international event on certification of persons

The Brazilian Association of Non-Destructive Testing and Inspection is organising the 2nd International Forum on Certification of Persons, promoted by Inmetro. The event – to be held on 29 and 30 September – aims to debate the importance of structured certification in the recognition of skills, based on systems for compliance assessment of various aspects practised at the national and international level.

The Forum is aimed at businesses from the sectors of industry and services, government and public organisations, educational institutions and professionals in general who are interested in the subject.

As in 2007, the event will be held at the Brazilian Association of Metallurgy, Materials and Mining (ABM), one of the supporters of the Forum.

Further information is available at [http://www.abendi.org.br/forum\\_certificacao](http://www.abendi.org.br/forum_certificacao)

### RAC is officially accredited by Inmetro to certify auditors

Brazil's Registry of Certified Auditors (RAC) has been officially accredited by the National Institute of Metrology, Standardisation and Industrial Quality as an Agency of Certification of Persons (OPC-002), for certification of Quality Management System Auditors, Environmental Management Auditors and Environmental Auditors.

The accreditation was granted by Inmetro after the RAC met all of the requirements and rectified the two non-compliances that were identified during the audit.

Formerly administered by the Center for Innovation and Competitiveness (CIC) and administered by ABENDI since January 2009, the RAC ensures that certified auditors meet the international requirements for the activity, guaranteeing that the work is performed in a reliable and secure manner.

The Director of Quality at Inmetro, Alfredo Lobo, stated that ABENDI's credibility on the market was essential for redeeming the RAC: "Creating a critical mass of good registered auditors provides trust in the certifications and a significant reduction in costs, since the certifying agencies will not need to have a large staff of their own auditors."

### ABENDI reopens process for recognition of rope access

ABENDI's Rope Access Committee decided to reopen the rope access recognition process on 1 March 2010, which will last until the beginning of certification implementation.

Applicants must provide documentation in accordance with information available on the site, as well as the documents NA-006, DC-022 for N1, DC-023 for N2 and DC-024 for N3.

For further information, visit [www.abendi.org.br](http://www.abendi.org.br)

### CONAEND & IEV 2010 to be held in one of Brazil's highest-investment cities

According to Agência Petrobras, with the discovery of the pre-salt layer, the Brazilian oil giant's investment in the Santos Basin jumped from 18 billion dollars in ten years to 40 billion dollars in five years. The mayor of Santos, João Paulo Tavares Papa, announced at Santos Offshore that it is a challenging time for the region and that the entire production chain is already attentive to this new reality, as well as the emergence of a culture of oil that is part of the economic agenda for the coastal area known as Baixada Santista.

It is against this backdrop that the CONAEND & IEV 2010 will be sponsored by ABENDI in Santos, in conjunction with the 17th Expoend (Exposition of NDT Products and Services), which will bring new technological challenges, in addition to the usual line-up, with information and the practical vision of technical specialists from the area of non-destructive testing and inspection – the subjects of the presentations and discussions at our CONAEND & IEV 2010 event.

For further information, visit [http://www.abendi.org.br/FrmEventoMan.php?evt\\_codigo=372](http://www.abendi.org.br/FrmEventoMan.php?evt_codigo=372)

## 5th Pan-American Conference for NDT

*2-6 October 2011*

*Cancun, Mexico*

Contact: Rubén M Campos, No 2651 Col Villa de Cortés, Del Benito Juárez C P, 03530, Mexico D F.  
Tel: +52 55 59 48 31 23; Email: [info@copaend5.com](mailto:info@copaend5.com)

**[www.copaend5.com](http://www.copaend5.com)**

## CALENDAR OF NDT EVENTS

Month	Date	Venue	Event	Contact
June 2010	7-11	Moscow Russia	10th European Conference on NDT	spektr@co.ru www.rsnttd.ru
	7-11	Maui Hawaii, USA	4th Japan-US Symposium on Emerging NDE Capabilities for a Safer World	conferences@asnt.org www.asnt.org
	14-17	Toronto Canada	3rd International CANDU In-Service Inspection and NDT in Canada Conference	events@cinde.ca
	22-24	Stratford-upon- Avon UK	7th International Conference on Condition Monitoring and Machinery Failure Prevention Technologies	cm_mfpt@bindt.org www.cm-mfpt.org
July 2010	18-23	San Diego USA	37th Annual Review of Progress in Quantitative Non-Destructive Evaluation (QNDE)	heidi@cnde.iastate.edu www.cnde.iastate.edu/QNDE/QNDE. html
	27-30	Québec Canada	Quantitative Infrared Thermography (QIRT) Conference	quebec@gel.ulaval.ca qirt2010.gel.ulaval.ca
August 2010	16-20	New York USA	NDE/NDT for Highways and Bridges: Structural Materials Technology (SMT) 2010	conferences@asnt.org www.asnt.org
	29-3 Sep	Dresden Germany	European Conference on Fracture ECF18	ecf18@dvm-berlin.de www.ecf18.de
September 2010	7-9	Volgograd Russia	Defectoscopy – the 11th International Exhibition on Non-Destructive Testing Equipment and Devices	skandmarket@restec.ru www.restec.ru/defectoscopy
	14-16	Cardiff Wales, UK	NDT 2010 Conference and Exhibition	karen.cambridge@bindt.org www.bindt.org
	29-1 Oct	Berlin Germany	8th International Conference on NDE in Relation to Structural Integrity for Nuclear and Pressurised Components	www.8thnde.com sk@dgzfp.de
October 2010	15-17	Athens Greece	7th National NDT Conference of the Hellenic Society of NDT	hsnt@hsnt.gr www.hsnt.gr
November 2010	15-19	Houston Texas, USA	ASNT Fall Conference and Quality Testing Show 2010	conferences@asnt.org www.asnt.org
October 2011	2-6	Cancún Mexico	5th Pan-American Conference on Non- Destructive Testing	info@copaend5.com www.copaend5.com
April 2012	18-20	Durban South Africa	18th World Conference on NDT	saint@acenet.co.za www.saint.org.za