CERTIFICATION MATTERS

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Abstract
This presentation will review the current status of the major documents relating to the certification of NDT operators currently available. The presentation will look at the different approaches to certification by sector looking at aerospace, industrial, nuclear power, oil and gas. The responsibility of the Employer and our experiences with auditors will also be assessed. A final section will look at what is on the horizon such as the merging of standards, the development of a global question bank, the sharing of resources amongst member NDT societies and the development of online examinations.

Keywords: Operator Certification, EN 473, ISO 9712, SNT-TC-1A

1. Introduction
The issues surrounding the training, examination and certification of NDT operators in today's industrial world are complex. The standards, the recommended practices and the employer specific requirements are in a state of constant change. I believe it is virtually impossible for the everyday industrialist to embrace the complexities of NDT certification matters. The purpose of this paper is to clarify where we are today and how the situation might develop in the future.

Today (April 2011) there continue to be two types of NDT operator certification programme – a) that termed second party, or Employer-based programmes such as those conducted through an employer Written Practice based on the recommended practices, SNT-TC-1A [1]; or the aerospace NDT
certification standards EN 4179 \cite{2} and NAS 410 \cite{3} and then there are b) the ‘third party’ or central certification programmes such as those established using EN 473 \cite{4} and/or ISO 9712 \cite{5}.

2. Second Party Certification Programmes

a) SNT-TC-1A - this is a recommended practice being a framework for an employer to create a Written Practice specific to the Company needs and which meets the requirement of his purchaser.

The resulting Company Written practice is approved by the Level 3 and a Company Representative will take responsibility for giving the operator the authority to work.

With this programme, as the source document is only a framework, then the Written Practice produced by this Company could vary significantly from that produced by other Companies, that is why the role of the purchaser is so important in ensuring that the Written Practice meets his needs.

b) There is also an ASNT standard document ASNT/ANSI CP-189 \cite{6} which requires the Employer to create a Written Practice but mandates minimum requirements to be put into the Written Practice rather than proposing minimum recommendations.

c) EN 4179 and NAS 410 – These documents from the Aerospace Industry have evolved to become technically equivalent. They are 2nd party schemes which require the Company to produce a Written Practice based on the requirements of the standards but clearly specifying the Company specific issues, e.g. which methods of NDT used, which techniques used, which Aerospace Primes, Codes and Specifications are used etc.

The Aerospace Industry maintains a high degree of oversight on the supplier chain and where appropriate the NADCAP programme is used for audit purpose.

3. Third Party Certification Programmes

These programmes reference EN 473 and ISO 9712

a) EN 473 is a European Standard which must be adopted by the European Nations. This document covers the concept of a Certification Body (which must meet the requirements of another standard – BS EN ISO 17024 \cite{7}).

This programme establishes levels of training, education and examination which are conducted at an Authorised Qualifying Body (AQB) through organisations duly accredited by the Certifying Body and which are separate from the Employer.
The certificate is issued to the ND T operator and is carried with him as opposed to the Employer-based programme, where the operator loses his certificate when moving employer.

b) ISO 9712 is the International Standard for operator certification in use generally outside Europe where EN 473 is mandatory. Many European systems make an effort to ensure that their EN 473 programme can also meet ISO 9712 usually by making a modification from the Standard. It is this aspect of the ISO 9712 programme which I have an issue with, under ISO/IEC Guide 21:1999 it is acceptable for the national programme to be modified on the understanding that a ‘national explanatory note’ is made in the area following where the modification was made, and that the document itself bears a notation ISO 9712 modified. Some schemes have made very small modifications but some have made quite considerable ones, including for example quoting of new training hours which are less than that in the Standard. My thoughts are that where a Nation modifies its programme (albeit in line with Guide 21) to produce a system whose elements are LESS than the Standard then this means that ISO 9712 is more of a recommendation than a Standard and that each purchaser of services provided through a national scheme using ISO 9712 needs to be aware of this and audit the programme where necessary.

4. The Future

4.1 The merging of standards is a positive way forward on the understanding that there can be no room for Nations to reduce the requirements of the standard into their own National Programmes.

4.2 Senior International NDT Societies should be encouraged to provide more assistance to emerging Nations so that a global level of NDT operator expertise can be developed for training, education, question banks, advice, consultancy and access are all areas which could be flowed down to the benefit of the industry on a global scale.

4.3 I would like to see a simplification of the current NDT programmes rather than increased complexity and confusion.

5. Conclusions

5.1 The programmes for NDT Operator Certification are many and varied.

5.2 The most common programmes today are either

a) Employer based programmes – second party

b) Central certification programmes – third party
5.3 The Employer Written Practice is considered essential in ensuring the appropriate method of certification is being used. This is overseen by the Level 3.

5.4 The purchaser has a key role in determining whether the employer’s certification programme meets his needs.

5.5 The employer is responsible in all cases for establishing that the NDT operator is authorized to work. A Company representative would be named in the Written Practice in this respect.

5.6 National NDT operator schemes working to recognized standards may be different and the purchaser needs to ensure that he is satisfied that whichever is chosen meets his needs and this is conveyed to the supplier through thorough audit of the supplier.

5.7 Future developments need to be carefully monitored to ensure there is no significant reduction in the quality of certification programmes.

5.8 Senior International NDT Societies now have a responsibility to work with and encourage those emerging Nations by assisting with provision of training resources, programme and procedure assistance, question banks and advice to encourage a unilateral development of a level of NDT operator certification globally.

6. References

[1] Recommended Practice Nº SNT-TC-1A 2006 Personnel Qualification and Certification in Non destructive testing

[2] BS EN 4179 : 2009 A erospace series – Qualification and approval of personnel for non-destructive testing


