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## PSL /10 ISSUE 14

### THE CERTIFICATION SERVICES DIVISION OF THE BRITISH INSTITUTE OF NON-DESTRUCTIVE TESTING

The British Institute of NDT is an accredited Independent Certifying Body, complying with the criteria of European standard ISO/IEC 17024 (General criteria for certification bodies operating certification of personnel), offering a flexible reliable and cost-effective method of satisfying NDT personnel qualification and certification standards EN 4179 (Aerospace Series) qualification of NDT personnel, and EN ISO 9712 Non-destructive testing - Qualification and certification of personnel.

The Accreditation of the Institute for personnel certification activities is signified by the use of the UKAS accreditation logo for personnel certification.



The Institute is also accredited to assess and certify/register quality management systems for compliance with the criteria in the international standard BS EN ISO 9000 series. The Accreditation of the Institute for quality systems certification activities is signified by the use of the UKAS accreditation logo for quality systems certification.

The Institute's Certification services are marketed under the PCN Scheme brand name. The PCN Scheme has built up an international reputation which, in the NDT field, is second to none. The PCN logo, shown right, signifies the highest standards in conformity assessment and certification, and those who have successfully aspired to gain authorisation to use the logo are justifiably proud of their achievements.



**The British Institute of NDT is accredited against ISO/IEC 17021 criteria to provide Quality Management Systems certification to the BS EN ISO 9000 series of standards as follows:**

*\* indicates that the certification body is accredited for all activities that fall within this sector.*

*++ indicates that the certification body is accredited for those activities that fall within this limited scope.*

|   |                      |   |
|---|----------------------|---|
| # | EAC 17*              | Basic metals and fabricated metal products  |
| # | EAC 18 <sup>++</sup> | Machinery for the production and use of mechanical power except aircraft, vehicle and cycle engines; machine tools; special purpose machinery.  |
| # | EAC 19 <sup>++</sup> | Electric motors, generators and transformers; Industrial process control equipment.   |
| # | EAC 22 <sup>++</sup> | Manufacture of bodies (coachwork) for motor vehicles, trailers; Manufacture of parts and accessories for motor vehicles and engines; Railway and tramway locomotives and rolling stock. |
| # | EAC 34 <sup>++</sup> | Management and administration of NDE services   |
| # | EAC 35 <sup>++</sup> | Testing, technical and analysis.  |
| # | EAC 37 <sup>++</sup> | Training centres providing NDE training; Examination centres for PCN examinations.  |

**The British Institute of NDT is accredited against ISO/IEC 17024 criteria to provide certification of personnel against specified standards as follows:**

The British Institute of Non-Destructive Testing (BINDT), which owns and operates the PCN Certification Scheme, is accredited as complying with the standard ISO/IEC 17024 to certify one of three levels of competence described in the current issue of the PCN documents 'General requirements for qualification and PCN certification of NDT personnel' (PCN/GEN) and Specific requirements for the qualification and certification of NDT personnel in the aerospace sector.

The competence required to achieve certification for each specific activity is described in the following appendices to the current edition of PCN/GEN:

- Appendix B Cast products, covering radiographic and ultrasonic NDT methods
- Appendix C Welded products, covering radiographic, ultrasonic and electromagnetic NDT methods
- Appendix D Wrought products, including forgings, covering eddy current and ultrasonic NDT methods
- Appendix E Pre and in-service Inspection (multi-sector, including castings, welds and wrought products), covering liquid penetrant, magnetic particle and visual testing NDT methods, and including radiation safety certification.
- Appendix F Railway products, including rail and axles, covering liquid penetrant, magnetic particle and ultrasonic NDT methods.

The above accreditation covers certification according to EN ISO 9712:2012.

The competence required to achieve certification for each specific activity is described in the current edition of PCN/AERO. The aerospace sector is a multi-sector that includes metallic and composite materials components and structures, covering eddy current, liquid penetrant, magnetic particle, radiographic and ultrasonic NDT methods.

The British Institute of NDT is also accredited against the criteria of ISO/IEC 17024 to certify personnel as having reached Level 2 competence in the ultrasonic testing of wrought plate. Details of the competences are given in the PCN Scheme document PCN-ISO 20807 (this certification is outwith the scope of EN ISO 9712).

A complete listing of PCN documents is provided on our web site ([www.bindt.org/PCN](http://www.bindt.org/PCN)) and in document PSL/8A, available from BINDT Certification Services.

**CURRENT PERSONNEL CERTIFICATION STANDARDS AND GUIDELINES**

- ISO 9712: Non-Destructive Testing - Qualification and Certification of Personnel
- ISO 11484: Steel products - qualification and certification of non-destructive testing (NDT) personnel performing the inspection of the following steel products under the employer's responsibility:
  - Tubes/pipes (seamless or welded)
  - Flat products, long products, rails , bars, sections, rod, wire
- BS EN 10256: Non-destructive testing of steel tubes - qualification and competence of level 1 and 2 non-destructive testing personnel
- prEN 4179: Aerospace series - qualification and approval of personnel for non-destructive testing
- ANSI-CP-189: ANSI/ASNT standard for qualification and certification of non-destructive testing personnel
- AIA-NAS-410: Aerospace Industries Association national Aerospace Standard for qualification and certification of non-destructive testing personnel
- SNT-TC-1A: ASNT recommended practice for the qualification and certification of non-destructive testing personnel (periodically reviewed and republished by the American Society for NDT)

## **PERSONNEL CERTIFICATION AND QUALITY ASSURANCE**

Non-destructive testing and inspection are vital functions in achieving the goals of efficiency and quality at an acceptable cost. In many cases, these functions are highly critical; painstaking procedures are adopted to provide the necessary degree of quality assurance. The consequences of failure of engineering materials, components and structures are well known and can be disastrous.

It is an increasing requirement of quality assurance systems that a company's engineers, technicians and craftsmen are able to demonstrate that they have the required level of knowledge and skill. This is particularly so since NDT and inspection activities are very operator dependent and those in authority have to place great reliance on the skill, experience, judgement and integrity of the personnel involved. Indeed, during fabrication, NDT and inspection provides the last line of defence before the product enters service, whilst once a product or structure enters service, in-service NDT is often the only line of defence against failure.

## **PERSONNEL CERTIFICATION - THE OPTIONS**

There are two main routes to qualifying NDT personnel:

### **In-company certification**

In company certification means that the scheme for examining and certifying inspection and test personnel is controlled by a company procedure. This procedure is usually produced and operated by an independently qualified person who may be employed by the company or be an external consultant. The main advantage of this system is that companies with unusual inspection requirements can ensure that their personnel are qualified only in areas specific to the inspection task.

Advice and assistance to organisations wishing to install or improve their in-house certification procedures is available from the Institute's Employer Certification Group. The Certification Services Division provides a secretariat for this group, which has expertise and knowledge of employer based certification programmes satisfying the requirements and/or guidance of ISO 11484, AIA-NAS-410, SNT-TC-1A, ANSI-CP-189 and prEN 4179.

BINDT provides an accreditation service for companies providing external (outside agencies) or internal training and/or examinations for NDT personnel. Details of this service can be found at:

<http://www.bindt.org/Certification/outside-agency-approvals/>

### **Independent certification complying with European and international standards**

Independent central, or 3<sup>rd</sup> party certification means that the inspection personnel are required to pass examinations, often at an approved Authorised Qualifying Body, which are devised and set by professional examiners licensed by a certifying body which has overall control over the certification scheme which it operates. The main advantage of such a system is that independently awarded verifiable qualifications carry wider recognition and relieve the company of having to devise the in-company scheme and to repeatedly demonstrate its effectiveness through audit.

The PCN scheme also offers a system whereby qualification and certification of NDT personnel can be carried out in accordance with European and international standards by an Authorised Qualifying Body or AQB. An AQB is defined as:

“A body, independent of any single predominant interest, authorised by the Independent Certifying Body to prepare and administer examinations to qualify NDT personnel.”

PCN document CP/9 sets out the general requirements for the creation of BINDT Authorised Qualifying Bodies for the purposes of issuing NDT personnel certification complying with agreed standards. Such a system offers the best of both worlds and has numerous advantages.

Any organisation – anywhere in the world - interested in becoming authorised to conduct PCN examinations is encouraged to seek further information from BINDT Certification Services.

## **PERSONNEL CERTIFICATION FOR CONDITION MONITORING**

There is a range of qualification examinations available within the PCN Scheme covering various condition monitoring technologies. Examinations are administered directly by BINDT and through a number of Approved Examination Centres (AEC).

Organisations that undertake training of condition monitoring personnel are assessed and accredited by BINDT, and are referred to as Accredited Training Organisations [ATOs]. The requirements for ATOs are defined in the BINDT accreditation document Acc Doc 04.

Document CM/GEN sets out general requirements while supplementary appendices are published covering requirements specific to the relevant condition monitoring technology:

|            |                                     |
|------------|-------------------------------------|
| Appendix A | Acoustic Emission                   |
| Appendix B | Infra-red Thermography              |
| Appendix C | Lubrication Management and Analysis |
| Appendix D | Vibration Analysis                  |

This series of documents is designed to provide comprehensive information for users of the PCN Condition Monitoring Certification Scheme. The complete list of published PCN documents relevant to condition monitoring is detailed in publication reference PSL/8A-CM, which is posted on the Institute's web site at [www.bindt.org](http://www.bindt.org), where all documents are available to download free of charge.

## **DEVELOPMENTS TO SUIT CHANGING NEEDS**

Examination availability is constantly extending to meet the needs of industry. BINDT is geared to respond rapidly to new demands. If you believe that there is a need for an examination not listed above, contact a BINDT Authorised Qualifying Body as it may be a straightforward matter to set up a job specific or special examination.

## **AN INDUSTRY LED INITIATIVE**

The policy under which the PCN scheme is operated is determined by the Certification Management Committee. The scheme is designed to set and maintain the highest standards for the proficiency of NDT personnel through independent examination and assessment. It is also designed to meet, as a minimum, the criteria specified in relevant European and international standards. BINDT is a world leader and puts the user in a strong position to compete in European and world markets.

The secretariat for the PCN Scheme is provided by the British Institute of Non-Destructive Testing from its Northampton headquarters. A Certification Management Committee, nominated by the British Institute, is the managing executive for the scheme. The Certification Management Committee is empowered to constitute Industry Sector Groups (ISG), with terms of reference to ensure the adequate provision of certification services to industry, monitoring the operation of any such ISG and periodically reviewing their terms of reference.

PCN Aerospace examinations are controlled by the UK National Aerospace NDT Board. Details of this Board can be found at <http://www.bindt.org/NANDTB/>

## **WORLD WIDE RECOGNITION**

PCN certification is also widely known and highly respected throughout the industrialised world. PCN certificates are accepted as evidence of competence in a number of countries. If ever any difficulty is experienced in certificate recognition, The British Institute's Certification Services Division is committed to making every effort to secure recognition for the benefit of certificate holders and their employers.

The potential advantage that seeking independent certification through BINDT confers (upon the individual when seeking employment anywhere in the world, or upon the company when dealing with overseas purchasers and suppliers specifying the most rigorous quality requirements) can be considerable.

Few, if any, other independent NDT personnel certification schemes offer a similar level of compliance with such a wide number of standards. It goes without saying that the integrity and thoroughness of the PCN certification scheme carries world-wide respect, earning an enviable reputation.

## **PROFESSIONAL SERVICE AT A COMPETITIVE PRICE**

We believe that there are some tasks better left to professionals. BINDT Authorised Qualifying Bodies are rigorously assessed by independent teams under an appointed registered lead assessor to ensure that they provide the highest standard of professional service, and that the security and confidentiality required of an examination system is maintained.

Price is important and Authorised Qualifying Bodies are closely monitored by BINDT to ensure that their examination fees are fair and reasonable. You are charged only for the examinations modules taken - no more and no less.

You can approach a BINDT Authorised Qualifying Body with the confident assurance that you will get the right advice, the right examination and, having passed the examination, the right certification - all at a fair price.

## **EXAMINATIONS WHERE AND WHENEVER YOU WANT THEM**

PCN examinations are available at a number of test and examination centres located in various parts of the United Kingdom, there are also centres in China, Singapore and Holland. Many Authorised Qualifying Bodies have a high degree of flexibility and can conduct examinations at any location, including overseas, upon demand. Examinations are conducted periodically in Australia, Malaysia, Japan, Denmark, South Africa and other locations according to demand.

PCN document PSL/4 provides details of the national and international network of BINDT Authorised Qualifying Bodies and the PCN examinations available at each. Telephone the AQB or Examination Centre of choice for an appointment and information on fees.

## **OBTAINING PCN DOCUMENTS**

Documents can be downloaded directly or ordered from our web site at [www.bindt.org](http://www.bindt.org)

Alternatively, PCN documents can be sent by e-mail or by post.

Requests should be directed to BINDT Certification Services at **Midsummer House, Riverside Way, Bedford Road, Northampton NN1 5NX** – tel: +44 (0)1604 438300; fax: +44 (0)1604 438301; email: [pcn@bindt.org](mailto:pcn@bindt.org)

## **PCN DOCUMENT UPDATE SCHEME**

The British Institute of NDT offers the means for companies to ensure that all PCN documentation held by them is current. Your company can register and automatically receive all new PCN documents and amendments to existing documents on a quarterly basis. The obvious saving in time, and the security of knowledge that your documentation is up to date, makes this service indispensable to the quality conscious company for a modest annual fee. Individuals or companies subscribing will receive all new issues and amendments of PCN documents listed in control document reference PSL/8A on a quarterly basis.

## **QUALITY ASSURED TRAINING**

To be eligible for PCN level 1 or level 2 examination, candidates must have successfully completed a BINDT approved course of structured training to the appropriate PCN syllabus.

Successful completion of a course of training implies that the candidate has attended all training sessions at a BINDT approved training establishment and achieved a satisfactory end of course assessment. Approved training establishments will provide trainees and their employers with documentary proof of successful (or unsuccessful) completion of training, together with a recommendation as to the trainee's preparedness for PCN examinations.

The British Institute of Non-Destructive Testing operates an accreditation scheme for NDT training establishments. The scheme is centred around the published criteria, "Minimum Requirements for the Structured Training of NDT Practitioners" and there are a large number of training courses available throughout the United Kingdom which have been assessed and validated.



The Institute also offers, within the PCN Scheme, assessment and ISO 9000 certification of the Quality Management Systems of organisations providing training. Following a successful assessment, a certificate of compliance with ISO 9002 is issued to the organisation, and the company and its available services are published in a register maintained by the Department of Trade and Industry (DTI). This is a really cost effective way to ensure BINDT approval of training whilst, at the same time, promoting your business and demonstrating that yours is a quality aware organisation. Enquiries to be

addressed to **BINDT Certification Services at Newton Building, St. Georges Avenue, Northampton NN2 6JB** – tel: +44 (0)1604 893811; fax: +44 (0)1604 893868; email: [pcn@bindt.org](mailto:pcn@bindt.org).

## **THE EUROPEAN PRESSURE EQUIPMENT DIRECTIVE**

The Secretary of State has appointed the British Institute of Non-Destructive Testing as a Recognised Third-Party Organisation under regulation 20 of the Pressure Equipment Regulations 1999 which implement the provisions of Directive 2014/68/EU of the European Parliament and of the Council on the approximation of the laws of the member States concerning pressure equipment.

The scope of the appointment is for the approval of personnel to carry out non-destructive tests on permanent joints for pressure equipment in categories III and IV in accordance with section 3.1.3 of Schedule 2 to the Regulations.

The Secretary of State will notify the European Commission and other EEA States of this appointment to act for the purposes stated above and it will be made public.

All existing valid PCN certification is encompassed within this approval, which is subject to the Institute continuing to satisfy the relevant criteria for notification as verified during annual surveillance and four yearly re-assessment by the United Kingdom Accreditation Service (UKAS).

In addition, BINDT offers assessment and evaluation of in-house NDT personnel qualification and approvals systems in the context of the Pressure Equipment Directive. This is offered as a stand alone service or in partnership with Notified Bodies and can be delivered world-wide. Further enquiries should be directed to, BINDT Certification Services.

## **EUROPEAN MUTUAL RECOGNITION**

BINDT is signatory to and registered under a European Multilateral Mutual Recognition Agreement (MRA) which is managed by the European Federation for NDT.



Each certification body recognised under this agreement is accredited by a national accreditation body and has submitted the following documents in support of its application for recognition:

- A letter of nomination from the national NDT Society of the country in which the scheme is based;
- A certificate of accreditation;
- A schedule detailing the scope of its accreditation (e.g. ISO/IEC 17024, ISO 9712, EN 4179 etc.).

The EFNDT Certification Executive Committee (CEC) reviews the evidence submitted in support of an application for registration under the MRA.

Following acceptance of an application by the CEC, it is accepted by all other participating certification bodies that the certificates of competence issued by the recognised certification body meet the minimum requirements of the applicable standards specified in the schedule of accredited scope. Registration certificates and schedules of accreditation defining the scope of compliance are available from [www.efndt.org](http://www.efndt.org)

## **ISO 9000 QUALITY MANAGEMENT SYSTEMS CERTIFICATION**

The British Institute of NDT is accredited to offer assessment and certification of the Quality Management Systems (QMS) of organisations involved in providing NDT services, whether they be training on site, testing in a laboratory or on site, or the provision of level 3 services. The following certification is available:

### **Certification of NDE Laboratory Services**

The organisation provides an NDE service at a permanent test house or laboratory.

### **Certification of NDE Site Services**

The organisation provides a permanent or extended (in excess of one calendar month) site NDE service.

### **Certification for NDE Level 3 Services**

The organisation offers the services of level 3 personnel certificated in accordance with a recognised standard (e.g. reference 2). Level 3 services can include any or all of the following:

- assuming full responsibility for a NDE facility and staff;
- establishing and/or validating NDE instructions or procedures;
- interpreting codes, standards, specifications and procedures and designating particular NDE methods, techniques and procedures to be used;
- validation of NDE procedures and techniques associated with in-service inspection of plant and machinery;
- training, examining or supervision of NDE personnel.

The organisation's registration certificate will indicate for which industry sectors and NDT methods such level 3 services are available.

### **THE BENEFITS OF QMS CERTIFICATION**

Gaining Quality Management System (QMS) certification is not easy, but the rewards can be great. A good QMS can reduce costs incurred through rework, supplier control, staff turnover and lack of effective procedures. A good QMS will improve communication and motivation within your company.

Certification of your QMS inspires the confidence of your clients and makes them feel secure in dealing with you. This is especially the case where they themselves operate in accordance with the criteria of the international standard.

You will also find that your products and services are more widely and readily accepted without audit by Regulatory Bodies and Quality Assurance Authorities, and your company will be included on published lists of approved tenderers and suppliers.

### **ASSESSMENT SERVICES TO INDUSTRY**

With its vast experience in the field, both in non-destructive testing and in the conduct of quality systems and technical assessments, BINDT is able to offer a professional yet cost effective service for assessment and surveillance of subcontracting NDT providers.

### **FURTHER INFORMATION -**

on any certification issues can be obtained direct from the Certification Services Division, The British Institute of NDT, Midsummer House, Riverside Way, Bedford Road, Northampton, NN1 5NX  
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