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GENERAL REQUIREMENTS FOR THE CERTIFICATION OF PERSONNEL FOR ENGINEERING INSPECTION AND TESTING

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1. SCOPE

- 1.1. This document, which prescribes the general requirements and procedures by which personnel may be assessed and, if found competent, certificated for one or more of a range of activities, has a number of appendices (listed at Annex A) dealing with the specific requirements for certification of competence for a range of inspection and testing activities. These appendices include requirements for qualification, examination and certification, and each provides a detailed examination syllabus, specimen examination questions, and a list of essential and recommended reading material.
- 1.2. Copies of PCN documents are available free of charge from BINDT Certification Services Division at **Midsummer House, Riverside Way, Bedford Road, Northampton, NN1 5NX**, United Kingdom. Organisations requiring at all times to be in possession of the most up to date PCN documents may register with the "PCN Update Scheme" which, for a small annual fee, guarantees that they automatically receive all new or revised PCN documents.
- 1.3. It is intended, through publication of these documents, to provide PCN candidates and certificate holders with all relevant information. However, if further information or advice is required on any certification matter, please contact the Certification Services Division of BINDT on telephone number +44 (01604) **438300**, or email questions to pcn@bindt.org.

2. DEFINITIONS

- 2.1. For the purposes of this document, the following definitions apply:
 - 2.1.1. Authorised Qualifying Body - A body, independent of any single predominant interest, satisfying the criteria detailed in PCN document reference CP9 and authorised by the British Institute of NDT to prepare and administer PCN examinations.
 - 2.1.2. Certification - Procedure used to demonstrate the qualification of personnel, and leading to the issue of a certificate. Certification does not include operating authorisation.
 - 2.1.3. Certification Body - The body that administers procedures for certification of NDT personnel in accordance with this specification, and fulfills the requirements of ISO/IEC 17024. In the present case, the Certification Body is the British Institute of Non-Destructive Testing (BINDT), which owns and operates the PCN Scheme.
 - 2.1.4. Employer - The organisation for which a candidate or holder of certification works on a regular basis.
 - 2.1.5. Examination Centre - A location, approved by BINDT, where PCN qualification examinations will be carried out strictly in accordance with the criteria detailed in PCN document reference CP9. An examination centre may or may not be associated with or situated at the main premises of a BINDT Authorised Qualifying Body, and could be situated in the candidate's workplace.
 - 2.1.6. Examiner - An individual holding relevant qualifications in the discipline for which he or she is to conduct, supervise and grade examinations and who is authorised so to do by the British Institute of NDT.
 - 2.1.7. Experience – Industrial experience in the specific inspection discipline concerned, which leads to the acquisition and maintenance of the required skill and knowledge and which is verifiable and gained under supervision of persons accepted as qualified to give such supervision.
 - 2.1.7.1. Experience may be acquired either prior to or following success in the qualification examination. However, candidates are advised that their chances of success in a PCN examination may be significantly reduced if they have no current experience in the field concerned. In the event that the PCN examination has been passed by a candidate lacking the experience required before certification, BINDT will issue a letter of attestation to the successful candidate indicating that he has passed the qualification examination and needs only to meet the experience requirement in order to be certified.
 - 2.1.8. Invigilator - An individual trained by the AQB in the process of examination invigilation to BINDT requirements, particularly with respect to the points to be observed during a practical examination.
 - 2.1.9. Multiple choice examination question - A question worded in a manner giving rise to four potential replies, only one of which is correct, the remaining three being incorrect or incomplete.

- 2.1.10. Procedure - A written description of all essential parameters and precautions to be observed when inspecting or testing following an established standard, code or specification.
- 2.1.11. Candidate - an individual seeking qualification and certification and who works under supervision of suitably qualified personnel gaining appropriate experience for qualification. Candidates may be self-employed so long as they provide documentary evidence that experience has been gained under the supervision of personnel holding qualification and/or certification acceptable to the British Institute of NDT.
- 2.1.12. 2.1.12 Operating Authorisation - A written statement issued by the employer based on the individual's competence as specified on the certificate. In addition to the certification, amongst other factors, the job-specific knowledge, skill and physical ability should be assessed for the specific task.
- 2.1.13. Practical Examination - An examination of practical skills in which the candidate demonstrates familiarity with specific inspection and/or testing, and any associated interpretation, and to record and to analyse acquired information to the degree required.
- 2.1.14. Qualification Examination - An examination administered directly by the British Institute of NDT or by an Authorised Qualifying Body, which assesses the general, specific and practical knowledge and skill of the candidate.

NOTE: *No documentary material, other than that provided by the examination centre, is to be accessible to the candidate under any circumstances during a PCN qualification examination. In an open book examination the candidate is provided with all necessary reference material by the examination centre; during a closed book examination, the candidate is not allowed access to any reference material whatsoever.*

- 2.1.15. Qualification - Evidence of training, professional knowledge, skill and experience as well as physical fitness to enable personnel to properly perform tasks within the scope of certification sought.
- 2.1.16. Recertification - The procedure for revalidation of a certificate through success in a practical and/or written examination.
- 2.1.17. Renewal - The procedure for revalidation of certification without examination.
- 2.1.18. Significant Interruption - A *significant interruption* means an absence from (or a change of) work activity which prevents the holder of PCN certification from practising the work for which certification was issued, for (a) a continuous period in excess of one year or (b) two or more periods for a total time exceeding two years.

NOTE: *Legal holidays, or periods of sickness or courses of less than thirty days are not taken into account when calculating the interruption.*

- 2.1.19. Test Specimen - A sample used in practical examinations.

3. GENERAL DESCRIPTION OF THE PCN SCHEME

- 3.1. The PCN Scheme is an international scheme for the assessment and certification of competence of engineering inspection and mechanical testing personnel which satisfies the requirements of a number of European and international standards.
- 3.2. The Scheme is Governed by a Certification Management Committee, and is managed and administered on a day-to-day basis by the British Institute of NDT, which takes into consideration the needs of industry through advice and guidance provided by a Certification Advisory Board and a Technical Committee.
- 3.3. Membership of boards and committees is open to the participation of individuals and organisations, and further information on the work of committees and committee membership is available from the Certification Services Division of the British Institute of NDT.
- 3.4. There is a wide range of qualification examinations available within the Scheme, covering various test methods and inspection techniques. Examining bodies are independent Authorised Qualifying Bodies, which have been audited against rigorous criteria prior to authorisation and, subsequent to authorisation, are subject to regular surveillance. Organisations anywhere in the world wishing to explore the possibility of being authorised to conduct PCN examinations are encouraged to discuss the potential for their involvement with the Head of Certification.

4. DUTIES AND RESPONSIBILITIES

- 4.1. The British Institute of NDT (BINDT)
 - 4.1.1. which owns and operates the PCN Scheme, is accredited by the United Kingdom Accreditation Service (UKAS) as fulfilling the requirements of ISO/IEC 17024;
 - 4.1.2. is charged by industry with maintaining and extending accreditation for the benefit of all participants in the PCN Scheme.
- 4.2. Authorised Qualifying Bodies:
 - 4.2.1. where established, work under the control of the British Institute of NDT;
 - 4.2.2. have the resources needed to administer examinations at examination centres, including the calibration and control of equipment;
 - 4.2.3. prepare and supervise examinations under the responsibility of an examiner authorised by the British Institute of NDT;
 - 4.2.4. are independent of any single predominant interest;
 - 4.2.5. apply a documented quality management system approved by the British Institute of NDT;
 - 4.2.6. have the resources and expertise necessary to establish examination centres;
 - 4.2.7. ensure that examination specimens are not in use for training purposes;
 - 4.2.8. maintain appropriate qualification and examination records according to BINDT requirements.
- 4.3. PCN Examination centres work under the direct control of the British Institute of NDT or its Authorised Qualifying Body, and:
 - 4.3.1. apply a documented quality procedure approved by the British Institute of NDT;
 - 4.3.2. have the relevant resources needed to administer examinations, including the calibration and control of equipment;
 - 4.3.3. prepare and conduct examinations under responsibility of examination staff authorised by the British Institute of NDT;
 - 4.3.4. ensure that examination specimens are not used for training purposes;
 - 4.3.5. shall have adequate qualified staff, premises and equipment to ensure satisfactory qualification examinations for the levels, methods, and industrial sectors concerned;
 - 4.3.6. use only those documents and examination questionnaires established or approved by the British Institute of NDT;
 - 4.3.7. use only specimens approved by the British Institute of NDT for the practical examinations conducted at that centre.
- 4.4. The employer introduces the candidate to the Examination Centre and:
 - 4.4.1. documents the validity of the personal information provided, including the declaration of education, training and experience required for the eligibility of the candidate;
 - 4.4.2. cannot be directly involved in the qualification examination.
 - 4.4.3. with regard to certificated persons, is responsible for:
 - 4.4.3.1. issuing the operating authorisation;
 - 4.4.3.2. verifying visual acuity in accordance with PSL/44, and
 - 4.4.3.3. verifying continuity without significant interruption in the competence certificated.
 - 4.4.4. Candidates for PCN Certification may be self employed so long as they provide documentary evidence that experience has been gained under the supervision of suitably qualified personnel. A self-employed candidate shall assume all of the responsibilities described for the employer.

5. ELIGIBILITY FOR EXAMINATION

5.1. Candidates for examination will have:

- 5.1.1. successfully completed a PCN recognised course of training covering the discipline in which certification is sought, and:
- 5.1.2. provide evidence of satisfying any prerequisite physical criteria, such as acuity of vision and colour perception.

6. EXAMINATION CONTENT

The qualification examination content and/or procedure is detailed in the appropriate appendix to this general specification.

7. EXAMINATION GRADING

- 7.1. To be successful, candidates are required to achieve a grade of 70% in all relevant examination parts.
- 7.2. Examination results notices will be issued to the candidate, to the individual or organisation paying the examination fee, and to the PCN Certification Records Office, within **28** days of the examination.

8. RETESTS OF FAILED EXAMINATIONS

Candidates failing to achieve a passing grade are permitted two retests of a failed examination part within **12** calendar months of the date of the initial examination. Failure in the second allowable retest will result in the candidate being considered an initial candidate.

9. ELIGIBILITY FOR CERTIFICATION

- 9.1. To be eligible for certification, the candidate shall:
 - 9.1.1. have achieved success in the applicable theoretical and practical examinations;
 - 9.1.2. provide verifiable evidence of having worked within the discipline concerned under the supervision of a person or persons with holding qualifications and/or experience acceptable to BINDT for a minimum period defined in the relevant appendix to this document;
 - 9.1.3. provide evidence of satisfying any vision requirements, and:
 - 9.1.4. have paid all fees and dues in respect of examination and certification.

10. CERTIFICATION

- 10.1. A PCN certificate and/or wallet card will be issued to the successful candidate within 28 days of providing BINDT with verifiable evidence of fulfilling all certification eligibility criteria.
- 10.2. Duplicate certificates are available for quality assurance purposes upon payment of an administrative charge. Duplicates will be issued to replace those lost or stolen only after extensive enquiries.
- 10.3. Photocopies of PCN certificates are unauthorised and should not be accepted as evidence of competence.
- 10.4. Verification of PCN certification is available free of charge from the PCN Certification Records Office (telephone +44 (0)1604 893811) and at www.bindt.org/PCN.

11. SUPPLEMENTARY CERTIFICATION

Holders of certain PCN certification may apply for supplementary certification covering one or more competencies. Applications must be made at least 90 days before expiry of the certificate to be supplemented. Details of the certification available and the supplementary examination content is provided in the relevant appendix to this general specification.

12. VALIDITY OF CERTIFICATION

- 12.1. The period of validity of the certification is five years from the date of certification indicated on the certificate except where success in the revalidation procedure occurs within the 90 days prior to expiry of the certificate, the new certificate will expire five years after the expiry date of the certificate being revalidated.
- 12.2. It should be noted that some standards might require renewal and/or recertification at more frequent intervals. The PCN renewal or recertification procedure may be invoked at any time within the period of validity of the certificate. If the renewal or recertification procedure is completed prior to 90 days before expiry, the new certificate will be valid for five years from the completion of that renewal or recertification procedure.
- 12.3. PCN certification is invalid:
 - 12.3.1. For any activity or scope of work which is not covered by the certificate;
 - 12.3.2. at the option of the British Institute of NDT after reviewing evidence of unethical behaviour (see CP27 – PCN Code of Ethics);
 - 12.3.3. if examination or certification fees are not paid when due;
 - 12.3.4. if the individual fails to satisfy the visual acuity criterion;
 - 12.3.5. if a *significant interruption* takes place in the work for which the individual is certified;
 - 12.3.6. from the date of issue of notification of failure in a PCN examination for recertification.

13. REVALIDATION UPON EXPIRY

Certificates have a status of either issue 01 or issue 02. Certificates bearing 01 are issued following success in an initial, supplementary or recertification examination. Certificates bearing 02 are issued following renewal after a review of satisfactory evidence of continuity in the work for which they are issued.

13.1. Renewal

- 13.1.1. Issue 01 certificates may be renewed following a review of satisfactory verifiable evidence of:
 - 13.1.1.1. Continuous satisfactory work activity, without significant interruption, in inspection and/or testing work appropriate to the scope of the certificate.
 - 13.1.1.2. Continuing professional development (CPD) of knowledge in the relevant technology.
- 13.1.2. Applications for renewal are to be made to the PCN Certification Records Office on the relevant form PSL/57.

13.2. Recertification

- 13.2.1. All issue 02 certificates are revalidated through success in a recertification examination which is detailed in the relevant appendix to this general specification.
- 13.2.2. Applications for recertification are to be made to the PCN Examination Centre on the relevant form PSL/57

14. COMPLAINTS AND APPEALS

- 14.1. PCN certificate holders must recognise that personal integrity and professional competence are the fundamental principles on which their inspection activities are founded (see also use and misuse of certificates). Accordingly, it is a condition of PCN certification that certificate holders shall undertake to comply with a code of ethics, which is published as PCN document reference CP27.
- 14.2. An aggrieved party in a dispute, which considers itself to have reasonable grounds for questioning the competency or ethical behaviour of a PCN certificated individual or his employer, may petition the British Institute of NDT for withdrawal or cancellation of certification. Such a petition must be accompanied by all relevant facts and, if it is the view of the British Institute of NDT that an adequate case has been presented, a full investigation of the circumstances under dispute will be initiated.
- 14.3. If the petition is substantiated to the satisfaction of the PCN Complaints and Appeals Panel (or a committee which has been assigned responsibility for such matters), the certification may be cancelled, or renewal or recertification may be refused, for such period as the BINDT may

decide, unless the holder of certification is successful in a further examination, the content of which will be decided by the PCN Scheme Committee at an ordinary meeting.

- 14.4. Appeals against certificate cancellation, failure to certify or failure to renew may be made by the candidate or the employer upon application in writing to the Head of Certification.

15. USE AND MISUSE OF CERTIFICATES

- 15.1. The issue of a PCN certificate indicates that the holder has demonstrated an acceptable level of competence measured by means of the relevant examination conducted at a BINDT Authorised Qualifying Body in accordance with the prevailing requirements on the date indicated. Holders or employers are not permitted to imply any further degree of competence on the basis of the certificate.
- 15.2. PCN certificate holders or their employers must not use or refer to PCN certificates, nor the PCN logo, nor must they knowingly allow them to be used or referred to by a third party, in a manner that may be considered fraudulent or to bring the PCN Scheme into disrepute. The full conditions of use of the PCN logo, or reference to PCN certification, are detailed in a separate document (PSL/31) available from the British Institute of NDT.
- 15.3. All certificated personnel are required to keep a register of complaints made against them within the scope of the certificate of competence (see also PCN document CP27 – Code of Ethics for PCN certificate holders). Failure to keep such a register or failure to enter valid complaints in it will be construed as a misuse of the certificate and appropriate penalties will be applied, see below. The register of complaints must be made available to the British Institute of NDT on request.
- 15.4. The penalty for misuse of PCN certification in all cases is invalidation of the certificate. If the misuse was in the public domain, publication of the transgression may also be undertaken. Any misuse, which appears to be an infringement of the law, will result in the matter being reported to the police.
- 15.5. Certificates are valuable documents, which should be kept in a safe place. Any suspicion of forgery or misrepresentation must be reported to the British Institute of NDT. Loss or theft of certificates must be reported to the police and to the British Institute of NDT.
- 15.6. It is required that all PCN certificate holders maintain a log demonstrating continuity in the application of the activity for which they are certificated. Examples of suitable pages for recording details of employment, continuity and surveillance are available separately.
- 15.7. New employers presented with PCN certification should satisfy themselves that the certificate holder has been employed without *significant interruption* on work for which the certificate was granted. It is strongly recommended that the employer request sight of the certificate holder's log of inspection and testing activity.

16. CERTIFICATION AND EXAMINATION RECORDS

- 16.1. The British Institute of NDT will retain records of certification issued as a result of success in any PCN examination for a minimum period of 11 years. An updated database of certificated personnel, which includes (amongst other things) the name, PCN identification number and scope of certification held by each individual, is maintained by the PCN Certification Records Office. Verification of the certification status of individual PCN certificated personnel is freely available upon request.
- 16.2. BINDT Authorised Qualifying Bodies will retain examination records of successful and unsuccessful candidates for a period of 11 years from the date of the examination. Audit of specific individual examination records, which are under the jurisdiction of the British Institute of NDT or its nominees, may be made in accordance with PCN document CP19.

ANNEX A: LIST OF CURRENT APPENDICES TO PCN I&T (GEN)

Appendix Ref	Status	Certification of competence for (work activity)
PCN WI-01	see www.bindt.org	Weld Inspection