AN EMPLOYERS GUIDE TO NDT PERSONNEL CERTIFICATION

This has been provided as an Employer’s Guide to Certification. Although it applies mainly to the application of an employer based certification system using EN4179, it applies equally to AIA NAS 410, and more than satisfies the requirements of ASNT SNT TC-1A

1.0 Introduction

1.1 Certification is a written statement by an employer that an individual has met the applicable requirements of a standard. The certification standard adopted by EASA is EN 4179. The UK Aerospace NDT Board mandated that with effect from 2017 EN4179:2017 should be used for the Training, Qualification and Certification of NDT personnel.

1.2 Until recently the UK CAA accepted route for certification was PCN Aerospace. Although all employers must now certify their personnel in accordance with EN 4179, PCN Aerospace certification is acceptable as satisfying some of the qualification requirements for certification.

2.0 EN4179:2017

2.1 EN4179:2017, which is equivalent in technical contents to AIA NAS 410:2014, details the requirements for the applicable training, experience, and examination for the following common NDT methods:

- Liquid Penetrant (PT)
- Magnetic Particle (MT)
- Eddy Current (ET)
- Ultrasonic (UT)
- Radiography (RT)
- Thermography (IRT)
- Shearography (SH)

2.2 This standard may also be applied to other NDT methods that can be used to determine the acceptability or suitability of for intended use of a part, assembly, etc., for example, thermography, holography, neutron radiography. However, the requirements for qualification must be established by the cognizant NDT organization (usually prime contractor or end user) or the UK Aerospace NDT Board, and be in accordance with EN4179:2017.
3.0 Written Practice

3.1 Employers using certified NDT personnel are required by EN4179 to develop and maintain a written practice for the qualification and certification of their NDT personnel that meets the requirements of the standard. This also applies to companies using NAS 410 or ASNT SNT TC1A.

3.2 The Written Practice should address the procedural details necessary for the employer to implement an NST qualification and certification program and should include the details of the NDT qualification and certification process, including:

- The levels of qualification and certification used by the employer
- Personnel duties and responsibilities
- Training and experience requirements
- Certification and recertification requirements

3.3 The Written Practice is mandatory as it an essential part of the EASA and CAA requirements for the qualification and certification of NDT personnel. Aerospace Inspection Training Ltd will on request provide your company with a unique Written Practice thereby ensuring compliance with the current regulations.

3.4 The following paragraphs provide an overview of the qualification and certification process.

4.0 Qualification Levels

4.1 Qualification is defined in EN4179 as the skill, training, knowledge, experience and, when applicable, the visual acuity required for personnel to properly perform to a particular level.

4.2 The qualification levels are:

- Trainee
- Level 1 ‘Limited’
- Level 1
- Level 2
- Level 3
- Instructor
- Auditor

5.0 Certification Levels

5.1 The levels requiring certification in accordance with EN 4179 are:

- Level 1 ‘Limited’
- Level 1
- Level 2
- Level 3
5.2 The requirements and responsibilities for each level of Qualification and Certification are given in the standard. It should be noted that NDT personnel shall not perform the functions listed if not certified to the appropriate level in the applicable technique/method.

5.3 When a Level 3’s duties require the inspection or evaluation of products, then proficiency in performance in such tasks shall be demonstrated to the requirements of Level 2.

6.0 Recertification

6.1 Level 1 ‘Limited personnel are re-certified by examination at intervals not to exceed one year.

6.2 Level 1 and 2 personnel are re-certified by examination at intervals not to exceed five years.

6.3 Level 3 personnel are re-certified by examination, or by a ‘points credit system’ at intervals not to exceed five years.

7.0 Visual Acuity

7.1 Near vision tests are administered annually

7.2 Colour perception tests are administered prior to certification or re-certification.

7.3 The tests are administered by personnel designated by the responsible Level 3 or the Outside Agency utilized for the qualification examination of personnel.

7.4 Any limitations in colour perception are evaluated by the responsible Level 3 prior to certification or re-certification and approved in writing.

8.0 Training

8.1 EN4179 details the minimum formal training hours required for certification. The formal training should always be supplemented by practical on-the-job-training with the employer.

8.2 The minimum training course outline is given in the standard, however, the actual course outline must be approved by the Responsible Level 3 or the UK Aerospace NDT Board, which has adopted the course outlines given in the Appendices to PCN AERO.

8.3 All completed NDT training should be documented.

8.4 Aerospace Inspection Training Ltd is a British Institute of NDT Accredited Training Establishment and is capable of providing the necessary NDT training for your NDT personnel. Training may be provided at the Training Centres in Norwich, Manchester, or Prestwick Scotland. In addition, training may also be provided at your facility either in the UK or overseas.
9.0 **Experience**

9.1 The minimum experience requirement is given in the standard. Documented experience in the NDT method gained with a previous method may be accepted.

10.0 **Examinations**

10.1 The requirements for the General, Specific, Practical examinations and the Basic Examination for a Level 3 examinations is given in the standard.

10.2 For the Specific Examination it is important to note that the open book examination should include the specifications, operating procedures and test techniques being used by the examination candidate in the performance of his duties with the employer.

10.3 For the Practical examination it is important to note that it is demonstration of proficiency in performing tasks that are typical of those to be accomplished in the performance of his duties with the employer. Therefore, it should ideally include all the NDT method processes/inspection techniques being used at the employers. In addition, the ability of the Level 2 to develop a work instruction is optional, not mandatory.

10.4 It is the responsibility of the employer and the nominated responsible Level 3 to determine the actual content of the specific and practical examinations.

10.5 Aerospace Inspection Training Ltd is a British Institute of NDT Accredited Examination Centre and is capable of providing the necessary NDT examinations, to your unique requirements, for your NDT personnel. Examinations may be provided at the Examination Centres in Takeley, Norwich, Manchester, or Prestwick Scotland. In addition, examinations may also be provided at your facility either in the UK or overseas.

11.0 **Responsibilities**

11.1 The employer is responsible for the implementation of, and compliance with the EN4179 and for certifying qualified persons.

11.2 The employer is solely responsible for the certification of its employees and cannot certify for another employer.

11.3 Self-employed individuals may certify themselves provided they have a written practice and have been qualified to the requirements of EN4179 by another individual certified to Level 3 in accordance with EN4179.

11.4 The employer must identify in writing a ‘Responsible Level 3’ to act on its behalf in matters regarding the NDT qualification and certification process.
11.5 Aerospace Inspection Training Ltd is a British Institute of NDT Accredited Outside Agency and is capable of providing the necessary Level 3 NDT persons to act as your nominated ‘Responsible Level 3’

12.0 Level 3 Services

12.1 The current regulations require that all NDT facilities providing certificated goods or services require an NDT Level 3 certified in the method or methods used by the employer at that facility. Very often companies do not have the finances to employ a full or even part time Level 3.

12.2 Aerospace Inspection Training Ltd supports a number of EASA Part 145 international carriers and overhaul facilities and EASA Part 66 companies as their NDT Level 3. Aerospace Inspection Training Limited is recognized as one of the world’s leading Aerospace NDT consultancy and training companies.

12.3 The NDT Level 3 services include:

- Annual visit(s) to your facility for the purpose of an internal audit and the monitoring of your NDT processes.

- The review and approval of NDT procedures, techniques and instructions, and unlimited advice for any NDT problem or situation that you may encounter.

12.4 The services that we offer will ensure your company’s compliance with EASA Part 145, National Aerospace NDT Board requirements and in particular the following references:

- EASA Pt 145 A30 (f) Personnel Requirements
- NAS 410/EN 4179
- CAP 747 GR No. 23