



NAndtB/17 - Qualification and Certification for Level 2 Limited

1. Status

Completely revised and approved for publication at the 64th meeting of the UK NANDTB.

2. Scope:

In accordance with EN4179, which permits subdivision, addition or limitation of certification levels without elimination or reduction of the four basic levels; the UK National Aerospace NDT Board (NANDTB) recognises qualification and certification at Level 2 Limited in accordance with requirements detailed in this document.

3. Terminology:

The term 'technique', used throughout this document, is taken from the EN4179:2017 Para 3.32 definition: "a category within a method; for example, ultrasonic immersion testing or ultrasonic contact testing". EN4179 does not define these techniques, but requires the employer's written practice to include specific technique(s) within each method. This allows the employer the flexibility to define the technique(s) that suit their requirements.

4. Application:

- a. The use of Level 2 Limited is not mandatory for employers. It is an optional, interim Level, intended to support development towards full Level 2 qualification, whilst allowing individuals to become productive at an earlier opportunity.
- b. Except for Radiographic Testing, Level 2 Limited certification is permitted for all Common Methods and Other Methods defined by EN4179.
- c. Individuals are restricted to Level 2 Limited certification in one technique only per method. They may, however, hold a Level 2 Limited technique certification in multiple methods. In most cases, the employer will specify the simplest technique in the method, as the basis for Level 2 Limited certification(s).
- d. A qualified Level 2 Limited is limited only by technique boundaries and should be comparable in every way with a qualified full Level 2 operating within the same technique boundaries. In the technique for which they hold Level 2 Limited certification, individuals shall:
 - Have the skills and knowledge to set up and standardize equipment, process parts, interpret and evaluate for acceptance or rejection, and document results.
 - Be thoroughly familiar with the scope and limitations of the technique.
 - Have the skills and knowledge to conduct system performance checks in accordance with the applicable process standard.
 - Be capable of providing necessary guidance and/or supervision to trainees and Level 1 personnel.

- Be familiar with the codes, standards, and other contractual documents that control the technique as used by the employer.
- When specified in the written practice, be capable of developing work instructions from approved general procedures. Such work instructions shall require final approval by a Level 3 certified in the method.
- Have a basic knowledge of relevant product manufacturing and inspection technology.
- When specified in the written practice, have a basic knowledge of aircraft or vehicle maintenance.

5. Regulatory Requirements:

- Normally, certification of inspections will be made by authorised persons who will hold NDT Level 2 or Level 3 qualification. However, in certain circumstances, and subject to the requirements detailed below, when the competent authority has agreed specific procedures within the MOE, persons qualified to Level 2 Limited may issue certification. EASA Part 145.A.35(g) refers further.
- Organisations wishing to use Limited Level 2 as the qualification standard to enable the issuance of a Certificate of Release to Service under Part 145, shall seek prior agreement from the UK CAA/MAA.

6. General Requirements:

- Training and examination shall be under the control of a NANDTB as per UK NANDTB policy and practice. Training, examination, certification and vision requirements shall comply with EN4179.
- The use of Level 2 Limited shall be agreed and documented by the Responsible Level 3 and approved by the cognizant engineering organisation. The Level 2 Limited qualification and certification requirements shall be detailed within the employer's written practice.
- Candidates for certification to Level 2 Limited shall be formally trained in accordance with the requirements of EN4179 and satisfy the minimum formal training hours for Level 2.
- Candidates for certification to Level 2 Limited shall meet the following examination requirements:
 - General examination, as for Level 2.
 - Specific examination, as for Level 2 covering all techniques required by the employer (not just the technique sought for Level 2 Limited).
 - Practical examination, consisting of at least two test samples of differing configurations for the technique being sought.
- The minimum experience required for Level 2 Limited shall not be less than that required for Level 1 certification in the method. With due consideration for the technique's complexity, and Paras 4c – 4e above, the required technique experience hours shall be defined by the Responsible Level 3 and documented within the employer's written practice.
- Level 2 Limited personnel shall be re-certified at intervals not to exceed one year. Recertification shall be accomplished by successful completion of practical and specific examinations equivalent to initial certification.

7. Progression to Full Level 2:

- The Responsible Level 3 should provide the opportunities, resources and encouragement for Level 2 Limited personnel to progress to full Level 2 in a timely manner.
- For employers who only use one technique within the method, Level 2 Limited personnel must meet the following requirements to progress to full Level 2:
 - Achieve the minimum method experience for Level 2, as specified in EN4179 Table II.

- Level 2 method certification will only be valid for the technique detailed in the employer's written practice.
 - The expiry date of the method Level 2 certification will be set at five years from the individual's Level 2 Limited certification (or last recertification).
- c. For employers that use two or more techniques within the method. Level 2 Limited personnel must meet the following requirements to progress to full Level 2:
- Achieve the minimum method experience for Level 2, as specified in EN4179 Table II.
 - Achieve the minimum experience in the other technique(s), as specified by the Responsible Level 3 in the employer's written practice
 - Practical examination, consisting of at least two test samples of differing configurations for the method being sought. There is to be at least one test sample for each additional technique detailed in the employer's written practice.
 - Level 2 method certification will be valid for those techniques detailed in the employer's written practice.
 - The expiry date of the method Level 2 certification will be set at five years from the individual's Level 2 Limited certification (or last recertification).

8. Level 2 Limited in Practice – Examples:

The following examples outline the nature of the limitation and possible organizational benefits. They are intended to be illustrative only. Responsible Level 3s should consider employer requirements, individual requirements and this policy when implementing a Level 2 Limited certification system.

a. Company A.

- Company A currently specialises in the Shearography (Vacuum) technique only, which requires 800 hours of ST(V) experience to qualify as L2.
- L2 Ltd experience hours must be more than L1 ST (200 hours). RL3 considers the complexity of the technique and designates in the written practice the required minimum as 300 hours.
- Trainee completes L2 ST formal training, passes general, specific and 2 x ST(V) practical exams, accrues 300 hours of supervised ST(V) experience and is certified as L2 Ltd ST(V).
- They can now accrue remaining experience towards full L2; 500 hours of ST(V). This is productive work and should not require supervision.
- After twelve months, they have not yet achieved L2 and must fully recertify as L2 Ltd ST(V), by completing specific exam and practical exam on 2 x ST(V) test samples.
- After another seven months, they have accrued 800 hrs experience and can be certified to L2, but only in ST(V). There are no additional examination requirements, but their L2 certification will expire five years from their last L2 Ltd certification issue (ie in 4 years 5 months)
- If Company A then introduces ST(Thermal), the individual requires additional technique training, ST(T) experience (as designated by RL3), specific & practical exams (2 x ST(T) minimum) to qualify as L2 ST(V & T).

b. Company B.

- Company B plans to increase its Eddy Current capability in the Static & Dynamic techniques and takes on two trainees.
- Each trainee will require 800 hours of experience to qualify as L2 in ET(S) and ET(D). In total, the trainees will require 1600 hours experience. Supervisors will have to expend up to another 1600 hours (total 3200 before Company B has a ET(S) and ET(D) capability).
- RL3 designates the minimum L2 Ltd experience hours for ET(S) as 200 hours and ET(D) as 200 hours.
- Trainee X is to focus on ET(S), Trainee Y is to focus on ET(D). They pass respective general, specific and 2 practical exams, accrue 200 hours of technique experience and are certified to L2 Ltd ET(S) and L2 Ltd ET(D).
- Company C now has effectively a L2 capability in each technique (divided between two L2 Ltds), having expended only 800 hours (400 experience + 400 supervision).

- For X and Y to then qualify as full L2, each needs 600 hours of further experience and relevant exams:
- 400 can be in their respective L2 Ltd technique, accrued in a productive manner
- at least 200 more will be required in the other technique (supervised).
- L2 Ltd is limited to a single technique, so as long as they hold a L2 Ltd in the method, X and Y cannot also acquire the other technique, even if they get the 200 hours needed. This would be 'gaming the system' and diminishing Company C's incentive to develop them to full L2s.
- However, X & Y can acquire L2 Ltd in other methods - providing this is confined to a single technique in each method.

Signed for the Board

A handwritten signature in black ink, appearing to read 'Kevin Pickup', written in a cursive style.

Kevin Pickup
Chairman of the NAndtB

Change History:

Issue	Summary of Change	Date
4	Removal from page 3 from company B They take on two trainees: X, who will specialise in Static and Y who will first specialise Trainee Y will specialise in Dynamic, who complete L2 ET formal training, pass general, specific and 2 x ST(V) practical exams Change table added	18-09-2018