



National Certification Body for Non Destructive Testing (CBNDT), Sri Lanka

C/O; National Centre for Non Destructive Testing (NCNDT)
977/18, Bulugaha Junction, Kandy Road, Kelaniya, Sri Lanka
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Guidelines for NDT Personnel Certification as per ISO 9712:2012

1. Submission of Certification Application

- Applicants may apply for certification in six conventional NDT methods (MT, PT, UT, RT, ET and VT) for any level.
- They are expected to finalize certification no later than two years from the date successfully completed the examination. Applicants who have not finalized certification after 2 years has elapsed are required to re sit the practical examination (re-certification examination). The completed certification application form (ref. CBNDT/FRM/CA) and supporting documents as mentioned in the initial certification application form shall be submitted to:

“OIC - Certification Unit,
National Certification Body for NDT - Sri Lanka,
C/O; National Centre for Non Destructive Testing (NCNDT),
No.977/18,
Bulugaha Junction,
Kandy Road,
Kelaniya.”

- The application for certification must be submitted to CBNDT within two years after the qualification exam, even if the required experience times of certification are not sufficient.

2. Initial Certification Requirements

All applicants shall abide by the code of ethics published by the certification body. They shall fulfil following requirements to be eligible for initial certification.

- Vision
- NDT training
- Qualification examination
- Industrial NDT experience

2.1. Vision Requirements

The applicant seeking for certification in any NDT method or level shall provide documented evidence (ref. CBNDT/FRM/EER) of satisfactory vision, in accordance with following requirements:

- Near vision shall permit reading a minimum of Jaeger number 1 or Times Roman N4.5 or equivalent letters(having a height of 1.6mm) at not less than 30 cm with one or both eyes, either corrected or uncorrected;
- Colour vision shall be sufficient that the candidate can distinguish and differentiate contrast between the colours or shades of grey used in the NDT method concerned.

2.2. Training Requirements

- For all levels, the candidate shall satisfactorily complete a course of theoretical and practical training recognized by the CBNDT.
- The candidates shall fulfil minimum requirement of training prior to qualification examination to be eligible for certification. The minimum duration of training undertaken by the candidate for certification in particular NDT method is given in Table 1. Training hours include both theoretical and practical lessons.
- Direct access to level 2 requires the total hours shown in Table 1 for Levels 1 and 2.

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- Direct access to level 3 requires the total hours shown in Table 1 for Levels 1, 2 and 3. When considering Part C of the basic examination for Level 3, additional training about the other NDT methods is necessary.

Table 1 - minimum requirements for the training

NDT method	Level 1 (hours)	Level 2 (hours)	Level 3 (hours)
ET	40	48	48
MT	16	24	32
PT	16	24	24
RT	40	80	40
UT	40	80	40
VT	16	24	24
Note: For RT, training hours do not include radiation safety training			

- “Training Guidelines in Non-destructive Testing Techniques-2013 Edition (IAEA-TECDOC-628/Rev. 3)” includes the syllabus for NDT training courses. It is freely available for downloading (ref. http://www-pub.iaea.org/MTCD/Publications/PDF/TE-628-REV3_web.pdf).
Note: The training course organizers shall complete the “Application for ISO Certification Courses” (ref. CBNDT/FRM/TC) to CBNDT for being recognized as training requirements fulfilled.

2.3. Qualification Requirements

2.3.1. Examination rules and regulations are given in CBNDT/INF/EX/REG.

2.3.2. Level 1 and level 2 certification

- Written examination- The candidates must have obtained a minimum grade of 70 % in each of the written examinations i.e. General, Specific and Radiation Safety (for RT only) examinations, of the particular NDT method.
- Practical examination- The candidates must have obtained a minimum of 70 % for each specimen tested.
- Application for CBNDT Level 1 and Level 2 certification examination (ref. CBNDT/FRM/EX/L1_L2) shall be submitted to CBNDT prior to the examination.

2.3.3. Level 3 certification

- Basic examination-The candidate must have obtained a minimum of 70 % in each of the three parts of Basic examination.
- Main-method examination-The candidate must have obtained a minimum of 70 % in each of the three parts of Main-method examination.
- Application for CBNDT Level 3 certification examination (ref. CBNDT/FRM/EX/L3) shall be submitted to CBNDT prior to the examination.

2.4. Industrial Experience requirements

2.4.1. Applicants shall maintain industrial experience log book on the method applying for certification. The log book shall at least include:

- Date
- Description of the work equipment/ test objects used
- Work place
- Reference to test report
- No of inspection hours including report preparation
- No. of Radiographs (captured, developed, interpreted) – for RT only
- Signature of level 2 supervisor - for level 1 applicants only

- 2.4.2. The industrial experience in the relevant method shall be obtained under qualified supervision.
Note: The qualified supervision is supervision of candidates in acquiring experience through NDT personnel, who are certified in the same way or by personnel who have the knowledge, skills, training and experience, which are necessary for the correct performance of such oversight.
- 2.4.3. All candidates (either employed, self-employed or unemployed) must have verifiable evidence, that they have acquired the necessary experience under qualified supervision.
- 2.4.4. Experience summary on the certification application form (ref. CBNĐT/FRM/CA) shall be confirmed by the employer or the qualified supervisor. Instructions for employers are available in CBNĐT/INF/EMP.
- 2.4.5. If the candidate is unemployed the declaration of the experience must be confirmed by at least one independent party. Following acknowledgments are accepted by the CBNĐT: confirmations by the former employer, temporary employment agencies, and internships at accredited training organizations, etc.
- 2.4.6. If the candidate is self-employed the declaration of the experience must be confirmed by at least one independent party. Following acknowledgments are accepted by the CBNĐT: confirmations by the former employer, customer, client, temporary employment agencies, and internships at accredited training organizations, etc.
- 2.4.7. The minimum period of experience in the method, for which the candidate seeking certification, is given in Table 2.

Table 2 - minimum requirements for the industrial NDT experience

NDT method	Experience (months)		Experience (hours)	
	ET, RT, UT	MT, PT, VT	ET, RT, UT	MT, PT, VT
Level 1	3	1	480	160
Level 2 access as level 1	9	3	1440	480
Level 2 direct access	12	4	1920	640
Level 3 access as level 2 (Type 1)	18	12	2880	1920
Level 3 access as level 2 (Type 2)	36	24	5760	3840
Level 3 access as level 1 (Type 1)	27	15	4320	2400
Level 3 access as level 1 (Type 2)	45	27	7200	4320
Industrial experience in months is based on a nominal 40h week or the legal week of work. When an individual is working in excess of 40 hours a week, he may be credited with experience based on the total hours, but he shall be required to produce evidence of this experience. Type 1: Candidates who have successfully completed a technical school or at least two years of engineering or science study at a college or University. Type 2: Candidates who have not successfully completed a technical school or at least two years of engineering or science study at a college or University.				

Ex: UT Level 2 Direct Access

Minimum required Industrial experience = 12 months = 12*4weeks*(40 hours/week) = 1920 hours

An individual works 10 hours per week in UT for 14 months will actually be having 560 hours only. (10*4*14 = 560 hrs)

- 2.4.8. When a candidate seeks certification in more than one method, the total experience time equals to the sum of experience in each method.
- 2.4.9. In the event that a part of the experience is sought following successful examination, the results of the examination shall remain valid for two years or for the total experience time required for the methods concerned, whichever is greater.
- 2.4.10. For Level 2 certification, industrial experience is the work performed as a Level 1 qualified. For Level 3 certification, industrial experience is the work performed as a Level 2.
- 2.4.11. Reduction Opportunities
- The possible reductions of experience are as described hereafter, provided that, when several reductions are applicable, the total reduction does not exceed 50% of the experience duration.
 - Any reduction requires the approval of the CBNDT Technical Advisory Committee.
 - Credit for industrial experience may be gained simultaneously in two or more of the NDT methods. The reduction of total required experience as follows:
 - Two testing methods, reduction of total required time by 25 %;
 - Three testing methods, reduction of total required time by 33 %;
 - Four or more testing methods, reduction of total time by 50 %.
 - In all cases the candidate shall be required to show that, for each of the NDT method / sector combinations for which he seeks certification, he has at least half of the experience required, and this shall never be less than one month in duration.
 - Experience duration may be reduced by up to 50 % (but shall not be less than one month) when the certification sought is limited in application e.g. UT thickness measurement or automated testing.
 - Up to 50 % of the practical experience time may be achieved by an appropriate practical course, the duration of which may be weighted by a factor of five (5).
- 2.4.12. Applicants lacking minimum required industrial experience
- An applicant who lacks the minimum experience requirement but has received the relevant training and has demonstrated competence by qualifying the examinations, may request to be granted “Trainee” status through submitting “Application form for Trainee” (ref. CBNDT/FRM/TRA) within two years from the date of examination and have certification deferred.
 - Trainee status is valid for five years from the date of success in the practical examination. Applicants who require more than two years to accumulate the required experience hours will have to demonstrate to the Technical Advisory Committee they have not had a significant interruption, otherwise a re-sit of the practical examination will be required.
 - Trainees may accumulate industrial experience over a five year period but must finalize certification before five years has elapsed from the first examination date.
 - It is the responsibility of trainee to inform the CBNDT of experience gained whilst holding that status. Once the CBNDT has received evidence from the applicant of minimum required experience in hours has been satisfied, trainee status will be upgraded to full certification with an expiry date 5 years from the date they completed the practical examination.
 - If after five years the trainee has not finalized his certification, the application will lapse and must apply for certification as a new applicant.

3. Responsibilities

3.1. Applicants/Candidates

Applicants/candidates, whether employed, self-employed or unemployed shall:

- i. provide documentary evidence of satisfactory completion of a course or of training;
- ii. provide verifiable documentary evidence that the required experience has been gained under qualified supervision;
- iii. provide documentary evidence of vision satisfying the requirements
- iv. abide by the code of ethics published by the certification body.

3.2. Certificate Holders

Certificate holders shall:

- i. abide by the code of ethics published by the certification body;(ref. CBNBDT/FRM/ACI)
- ii. undergo an annual test of visual acuity, and submit the results of tests to the employer;
- iii. notify the certification body and the employer in the event that the conditions for validity of certification are not fulfilled.

3.3. Employers

Ref. CBNBDT/INF/EMP

4. Duties/Rights of Certified individuals

4.1. Level 1

An individual certified to level 1 has demonstrated competence to carryout NDT according to written instructions and under the supervision of Level 2 or Level 3 personnel. Within the scope of the competence defined on the certificate, Level 1 personnel may be authorized by the employer to perform the following in accordance with NDT instructions:

- i. setup NDT equipment;
- ii. perform the tests;
- iii. record and classify the results of the tests according to written criteria;
- iv. report the results.

Level 1 certified personnel shall neither be responsible for the choice of test method or technique to be used, nor the interpretation of test results.

4.2. Level 2

An individual certified to Level 2 has demonstrated competence to perform NDT according to NDT procedures. Within the scope of the competence defined on the certificate, Level 2 personnel may be authorized by the employer to:

- i. select the NDT technique for the testing method to be used;
- ii. define the limitations of application of the testing method;
- iii. translate NDT codes, standards, specifications and procedures into NDT instructions adapted to the actual working conditions;
- iv. set up and verify equipment settings ;
- v. perform and supervise tests;
- vi. interpret and evaluate results according to applicable standards , codes , specifications or procedures;
- vii. carryout and supervise all tasks at or below Level 2
- viii. provide guidance for personnel at or below Level 2
- ix. report the results of NDT.

4.3. Level 3

An individual certified to Level 3 has demonstrated competence to perform and direct NDT operations for which he is certified. Level 3 personnel have demonstrated:

- i. the competence to evaluate and interpret results in terms of existing standards , codes and specifications;
- ii. sufficient practical knowledge of applicable materials, fabrication, process, and product technology to select NDT methods , establish NDT techniques, and assist in establishing acceptance criteria where none are otherwise available;
- iii. a general familiarity with other NDT methods.

Within the scope of competence defined on the certificate, Level 3 personnel may be authorized to:

- i. assume full responsibility for a test facility or examination center and staff;
- ii. establish, review for editorial and technical correctness, and validate NDT instructions and procedures;
- iii. interpret standards , codes, specifications and procedures;
- iv. designate the particular test methods procedures and NDT instructions to be used
- v. carry out and supervise all tasks at all levels;
- vi. provide guidance for NDT personnel at all levels.

5. NDT Initial Certification Fee

Note: The initial certification fees do not include fee for examinations (ref. CBNDT/INF/CF).

Table 3: Initial Certification Fee

Application Number	Fee(Rs)	Cumulative Fee(Rs)
1st	3000.00	3000.00
2nd	2250.00	5250.00
3rd	2250.00	7500.00
4th	2250.00	9750.00
5th	2250.00	12000.00
6th	2250.00	14250.00
7th	2000.00	16250.00
8th	2000.00	18250.00
9th	2000.00	20250.00
10th	2000.00	22250.00
11th	2000.00	24250.00
12th	2000.00	26250.00
13th	1500.00	27750.00
14th	1500.00	29250.00
15th	1500.00	30750.00
16th	1500.00	32250.00
17th	1500.00	33750.00
18th	1500.00	35250.00

6. Renewal of Certification

Prior to the completion of the first period of validity and every 10 years thereafter, certification may be renewed by the CBNBDT for a new period of five years.

It is the responsibility of the certificate holder, to submit completed and signed renewal application to the CBNBDT (ref. Application for CBNBDT certification renewal CBNBDT/FRM/CRA).

All documents for the renewal (original certificate on expiry of the period, documentary evidence of satisfactorily fulfilling the vision requirements, documentary evidence of continued satisfactory work activity relevant to the certification during the preceding 12 months and without significant interruption) shall be submitted within six months before the expiry date of the certification to the OIC-Certification Unit of CBNBDT.

As an exception, and based upon decision of CBNBDT, files presented within 12 months after the date of expiration may be considered. Given a written explanation must be submitted to the CBNBDT in addition to the application. After the period of twelve (12) months after the expiration date no longer an exception is allowed and the candidate must pass a recertification exam successfully in order to be re-certified. (Ref. "Application for NDT Re-Certification Examination CBNBDT/FRM/RCEX", "Re-Examination Application form for NDT Re Certification CBNBDT/FRM/RERCEX", "Eye Examination Report Form CBNBDT/FRM/EER").

7. Re-Certification

Prior to the completion of the second period of validity (every 10 years), the certified individual may be recertified by the CBNBDT for a new period of five years.

It is the responsibility of the certificate holder, to submit completed and signed recertification application to the CBNBDT certification unit (ref. recertification application form CBNBDT/FRM/RCA). Duly completed recertification examination application form (ref. Application for NDT recertification examination CBNBDT/FRM/RCEX) shall be submitted to MA-Examination Committee and all documents for the recertification (eye examination report form and recertification application form) shall be submitted to the OIC-Certification Unit of CBNBDT within twelve (12) to six (6) months before the expiry date of the renewed certification. Once the application form is received, MA-Examination Committee coordinates with chairman-EC and informs the candidate a date for the recertification examination.

Re-certification of Levels 1 and 2

The individual shall successfully complete a practical examination which demonstrates continued competence to carry out work within the scope of the certificate. For Level 2, the production of a written instruction suitable for the use of Level 1 personnel is required.

Re-certification of Level 3

Level 3 certificate holder seeking re-certification must provide evidence of continued qualification confirmed by:

- Satisfying the Level 3 requirements for a written examination*;
- Meeting the requirements for a structured credit system, as specified in Appendix A.

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The certified person may decide between the written examination and the credit system for recertification. When the credit system is selected, the delivery of documents of the employer or the access is required to premises of the employer. The applicant shall provide to the CBNBDT a written statement of approval from the employer for accessing employer's premises and related documents.

The following three combinations are accepted by the CBNBDT for recertification in level 3:

Combination 1: Written exam + level 2 practical exam except drafting of NDT instructions

Combination 2: Written exam + documented evidence of continued practical competence

Combination 3: Structured credit system + level 2 practical exam except drafting of NDT instructions

Note 1:

CBNBDT recertification is not possible based on the combination of "structured credit system" + "proof of continuing practical ability".

Note 2: written examination*

The individual shall successfully complete an examination that includes a minimum of twenty (20) questions on the application of the test method in the sector(s) concerned which demonstrates an understanding of current NDT techniques, standards, codes or specifications, and applied technology and, five additional questions on the requirements of the certification scheme.

Appendix A-Structured credit system for Level 3 re-certification

In this system, the Level 3 candidate gains credit for participation, during the five years prior to recertification, in the various NDT activities shown in following table. Limits are placed on the maximum number of points which can be gained in each year, and in any activity over the five years, to ensure an even spread of activities.

To be eligible for recertification:

- a. A minimum of 70 points during the five year validity of the certificate;
- b. A maximum of 25 points per year are accepted.

In addition to the recertification application, the candidate shall submit evidence of satisfying the criteria of Table 4 as follows.

- Agenda and list of attendees for the meetings under items 1 to 4;
- A brief description of research and development under item 5;
- References of technical or scientific publications authored under item 5;
- A summary of training delivered under item 6;
- For each certificate, evidence of work activity per under item 7.

Late submissions

If the recertification is applied for more than 12 months after expiry of the period of validity of Level 1 renewed certificate, a complete examination (general, specific, and practical) for Level 1 shall again be passed successfully.

If the recertification is applied for more than 12 months after expiry of the period of validity of Level 2 renewed certificate, a complete examination (general, specific, and practical) for Level 2 shall again be passed successfully.

If the recertification is applied for more than 12 months after expiry of the period of validity of Level 3 renewed certificate, a main method examination for Level 3 shall again be passed successfully.

Table 4 – Structured credit system for Level 3 recertification

Item	Activity	Point accorded for each item (or function)	Maximum points per year per item	Maximum point per 5 year period per item
1	Membership of an NDT society, attendance at seminars, symposia, conferences and/or course covering NDT and related sciences and technologies	1	3	8 ^a
2.1	Attendance at international and national standardization committees	1	3	8 ^a
2.2	convenorship of standardization committees	1	3	8 ^{ab}
3.1	Attendance at sessions of the other NDT committees	1	3	8 ^a
3.2	convenorship of sessions of the other NDT committees	1	3	8 ^{ab}
4.1	Attendance at Sessions of NDT related working group	1	5	15 ^a
4.2	convenorship of NDT related working group	1	5	15 ^{ab}
5.1	NDT related technical/scientific contribution or publications	3	6	20 ^{cd}
5.2	NDT related research work published	3	6	15 ^{cd}
5.3	NDT research activity	3	6	15 ^{cd}
6	NDT technical instructor (per 2h) and/or NDT examiner (per examination)	1	10	30 ^d
7	Professional activity	-	-	-
7.1	within a NDT facility, NDT training center or NDT examination facility or for Engineering of NDT (See Annex E of ISO 9712:2012) (for each full year)	10	10	40 ^d
7.2	Dealing with disputes referring to clients	1	5	15 ^d
7.3	Development of NDT applications	1	5	15 ^d
a Maximum points for item 1 to 4: 20 b point to be given for both convenorship and attendance c if there is more than one author, the lead author shall define point for the other authors d Maximum points for each of item 5 and 6: 30 and 7: 50				

Director – NCNDT (Technical Advisory Committee Member)
 National Certification Body for NDT
 Sri Lanka