

	MEENA INTERNATIONAL Training & Certification Division General Requirements for	No.	SD-01
		Revision No.	1
		Date	07/11/2017
Qualification & IPC Certification of NDT Personnel to ISO-9712:2012			

Meena International

IPC General Requirements

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Revision History:

Revision No.	Date	Pages	Revision Details
1	07/11/2017		IAS Initial Assessment Comments Addressed

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Introduction:

The IPC Scheme is an international programme for the certification of competence of non-destructive testing personnel which satisfies the requirements of a number of Global Technical standards.

The Council of Meena International constitutes a Certification Management Committee (CMC) and delegates to the CMC the responsibility for maintaining a management overview of the operations of its Certification Services Division. Membership of boards and committees is open to the participation of individuals and organisations. Further information on the work of committees and committee membership is available from The Certification Services Division of Meena International.

The CMC fulfils the requirement for a Scheme Committee in terms of ISO/IEC 17024 (Personnel Certification) and an Impartiality Committee in terms of ISO/IEC 17021 (Management Systems Certification).

There is a wide range of qualification examinations available within the Scheme, covering various NDT methods and techniques. Meena International Conduct such examinations at the main test centre in Chennai and other test centres and all such examinations are directly supervised by MEENA.

This document, will be implemented with effect from 1st October 2017, sets out the general requirements and procedures common to all central parts of the scheme. Supplementary appendices are published covering specific examinations applicable to various industry and product sectors.

The following are the Sectors covered as defined in Annexure-A to ISO 9712:2012:

Castings

Welds

Wrought Products and Forgings

Pre-and In-service Inspection Multi-Sector (Including Manufacturing Sector)

This series of documents is designed to provide comprehensive information for users of the IPC Scheme. The complete list of published IPC documents is detailed in publication reference Master List. Selected IPC documents are also available for download from the Institute's web site at www.meenainternational.com

Copies of IPC documents are available free of charge from MEENA Certification Services Division at Plot No. 7, First Cross Street, VGN Royal Enclave, Paruthipattu, Chennai - 600 071, Tamil Nadu, India. Organisations requiring always to be in possession of the most up to date IPC documents may register with the "IPC Update Scheme" which, for a small annual fee, assures that they automatically receive all new or revised IPC documents in electronic form by email. Meena International will scrutinise the request for such services carefully before enrolling any one for such automatic update services.

It is intended, through publication of these documents, to provide IPC 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 MEENA on telephone number +91 44 29036793, or email questions to admin@meenainternational.com.

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Foreword:

Pass Level Score:

From the date of implementation of IPC, the pass grade of an IPC exam will be as required by ISO 9712: 2012 edition which requires a straight 70% pass on each examination part, with no overall average. This will keep IPC Scheme in line with all other certification bodies operating an ISO 9712 scheme. If an employer requires an aggregate score of more than 70% they may use the result notifications provided to all candidates indicating the score achieved in every part.

1. Scope:

1.1. This document describes a system for the qualification and independent centralised certification of Non-destructive Testing (NDT) Personnel.

1.2. Specific details of the certification available at each level in the various NDT methods and industry sectors are contained in the appropriate supplementary / Annexure to this document. A list of the current supplementary Annexures is listed in the Master List and copies distributed all concerned parties whenever revised

1.3. This document incorporates provisions from other IPC publications, all of which are available from Meena International, Plot No. 7, First Cross Street, VGN Royal Enclave, Paruthipattu, Chennai - 600 071, Tamil Nadu, India., or from www.meenainternational.com, and which are listed below under "References".

2. References

ISO/IEC17024 General requirements for bodies operating certification systems of persons

CEN/TS 15053: Non-destructive testing – Recommendations for discontinuities-types in test specimens for examination

CEN ISO/TR 25107: Non-destructive testing – Guidelines for NDT training syllabuses (ISO/TR 25107:2006)

CEN ISO/TR 25108: Non-destructive testing – Guidelines for NDT personnel training organisations (ISO/TR 25108:)

EN ISO 9712: Non-destructive testing - Qualification and certification of personnel

*(This document is prepared in such a way that in case of any conflict between the requirements of this standard concerning NDT Personnel Qualification and Certification, the IPC Scheme is designed to meet or exceed the ISO 9712:2012 criterion unless otherwise clearly specified in **Block Letters**.)*

2.3. Other IPC documents referenced in this):

Master List of IPC Documents - Issue status

Form No.27 Exam Application along with Log of pre-certification experience

Form No. 32 Vision Requirements

Form No. 29 Fresher Application form certification, experience gained post examination (including log of post-certification experience).

Form No. 34a Renewal application for IPC Levels 1 & 2 certificates

Form No. 34b Renewal application for IPC Level 3 certificates

Form No. 33 Complaints and appeals

Form No.35 Marking and grading IPC practical examinations

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Form No. 36 [Level-3 Procedures writing answer sheet with details](#)

Form No. 37 Code of Ethics for IPC certificate Holders

[Form No. 38 Level-2 Instruction writing answer sheet with details](#)

3. Definitions:

The following are definitions for understanding and applying the requirements of this document:

3.1. Approved Training Organisation (ATO) – A legal entity assessed against the criteria in CEN ISO/TR 25108 and approved by MEENA to provide specified training courses for personnel intending to attempt a IPC or other specified examination.

3.2. Authorised Examination Centre (AEC) – a location, approved by MEENA, where IPC examinations are conducted directly by Meena International.

3.3. Appropriately Qualified Personnel - Individuals carrying out supervision of candidates for IPC certification holding relevant certification issued by a recognised certification body meeting the requirements of ISO/IEC 17024 or national equivalent.

Note: Such personnel shall have both theoretical and practical & supervisory competence and have a similar technical scope as that certification which is the subject of surveillance. Where there are insufficient appropriately qualified persons in a country outside of the India to satisfy the requirement, supervision of IPC candidates may be carried out by persons holding relevant qualification acceptable to MEENA. This clause is valid only for five years from the date of commencement of first program in that particular location / country.

3.4. Basic Examination - written examination, at Level 3, which demonstrates the candidate's knowledge of the materials science and process technology and types of discontinuities, the IPC qualification and certification system, and the basic principles of NDT methods as required for Level 2.

3.5. Level-II Material Process Technology Foundation Examination: - written examination, for all aspiring IPC Level 2, which demonstrates the candidate's knowledge of the materials science and process technology and types of discontinuities.

3.6. Candidate - individual seeking qualification and certification and who gains experience under the supervision of suitably qualified personnel.

3.7. Certificate – document, issued by the certification body (Meena International) under the provisions of the applicable standard, indicating that the named person has demonstrated the competence(s) defined on the certificate

3.8. Certification – The process followed by MEENA to confirm that the qualification requirements for a method, level and sector have been fulfilled, making the candidate eligible to obtain relevant certification.

Note: It is the responsibility of the employer to verify the scope of certification, assess the competence related their line of activity before employing centrally certified personnel in IPC Scheme.

3.9. Certification Body - The body that administers procedures for certification of NDT personnel in accordance with this document, and fulfils the requirements of ISO/IEC 17024.

3.10. Employer - The organisation for which a candidate or holder of IPC certification works on a regular basis. An employer may also be a candidate.

3.11. Examiner - Person certified to Level 3 (ASNT, ACCP or ISO-9712 from a reputed CB) in the method and product or industrial sector for which he is authorised by Meena International to conduct, supervise and grade the qualification examination.

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3.12. General Examination – A written examination, at Level 1 or 2, concerned with the general principles of in the specified NDT method.

3.13. Industrial NDT Experience – the experience needed to acquire the skill and knowledge to fulfil the provisions of qualification in the appropriate sector, and which is gained under the supervision of Appropriately Qualified Personnel, in the application of the NDT method in the sector concerned.

Note: Experience may be acquired either prior to or following (for level 1 and 2 entries only for personnel with a Bachelor Degree in Science or Engineering) If the IPC examination has been passed by a candidate lacking the experience required for certification, MEENA will issue a letter of attestation to the successful candidate indicating that he or she has passed the qualification examination and needs only to meet the experience requirement in order to be certificated. Records of experience obtained post examination shall be presented on IPC Examination Application form.

3.14. Invigilator - An individual trained by Meena in the process of examination invigilation to MEENA’s requirements, with respect to the points to be observed during both theory & practical examination, and who is impartial with respect to the candidate(s) under examination.

3.15. Job Specific Training - instruction, provided by the employer (or his agent) to the candidate or certificate holder in those aspects of non-destructive testing specific to the employer’s products, NDT equipment, NDT procedures, and applicable codes, standards and specifications, leading to the award of operating authorisation.

Note: A job specific examination, which is often solely of a practical nature, may be conducted by the employer as a part of the NDT personnel authorisation procedure for IPC Certified personnel or Meena International will conduct such examination as per written practice of the concerned employers who authorise Meena in writing for conducting and recording such examinations.

3.16. Main NDT Method Examination - written examination, for Level 3, which demonstrates the candidate’s general and specific knowledge of the applicable NDT method, and the ability to write NDT procedures for the NDT method as applied in the industrial or product sector(s) for which certification is sought. For Level-2 NDT Examination will be a combination of Theory & Practical in the required NDT Method & Sector.

3.17. 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

3.18. NDT Instruction - A written document prepared by a Level-2 candidate giving step by step instruction to be followed by a Level-1 technician in a NDT method for which certification is sought.

3.19. NDT Technique - A specific way of utilizing an NDT method (for example, Magnetic Particle Yoke Technique).

3.20. NDT Procedure – A written document listing all essential parameters/variables and precautions to be followed when performing NDT on components or products in accordance with required standard(s), code(s) or specification(s). An NDT Procedure can involve the application of more than one Technique.

3.21. NDT Method - Discipline applying one of the physical principles performing a Non-Destructive Testing (for example, Radiography Testing).

3.22. NDT Training - a process of structured instruction in theory and practical in the NDT method in which certification is sought, which takes the form of training courses to a syllabus approved fully meeting the requirement of ISO-9712, reviewed by MEENA from time to time for full compliance.

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3.23. Operator / Technician Authorisation - written statement issued by the employer, based upon the scope of certification, authorising an IPC Certified individual to carry out defined tasks. Authorisation may be dependent on the provision of job-specific training by the employer.

3.24. Practical Examination - Assessment of practical knowledge & skills in which the candidate demonstrates familiarity, and his ability to operate the given test equipment, to perform the test using prescribed settings, evaluate the specimens, record the findings, analyse the resulting information to the degree required and report.

3.25. Qualification - Demonstration of physical attributes, knowledge, skill, training and experience required to properly perform NDT tasks

3.26. Qualification Examination - An examination administered directly by Meena International, which assesses the general, specific and practical knowledge and skill of the candidate.

3.27. Qualified Supervision - supervision of candidates gaining experience by NDT personnel certificated under the IPC Scheme or by non-certificated personnel who, in the opinion of MEENA, possess the knowledge, skill, training and experience required to properly perform such supervision.

3.28. Recertification - procedure for revalidation of a certificate by examination or by otherwise satisfying the certification body that the published criteria for recertification are fully satisfied with documentary evidence.

3.29. Record of Certification - Document listing all IPC certification issued under the rules specified in IPC documentation, indicating that the named individual has demonstrated proficiency in performing NDT within the scope of the certification.

3.30. Renewal – A process followed for revalidation of a certificate without examination at any time up to five years after success in an initial by application, or by taking a supplementary examination to increase the certification scope or by recertification examination.

3.31. Sector - A range of products of industry or technology where specialized NDT practices are used, requiring specific product related knowledge, skill, ability to use special equipment or training. A sector may be interpreted to mean a product such as castings, welds or wrought products.

3.32. Significant Interruption - Absence from (or a change of) work activity which prevents the holder of IPC certification from practising the duties corresponding to his or her level in the method and sector(s) for which he / she is certified, for (a) a continuous period more than one year or (b) two or more periods for a total time exceeding two years during the five-year validity period.

Note: Declared holidays, or periods of sickness or days spent on NDT related courses of any duration are not considered when calculating the interruption.

3.33. Specific Examination - Written examination, at Level 1 or Level 2, concerned with testing techniques applied in a sector(s), including knowledge of the product(s) tested, and of codes, standards, specifications, procedures and given acceptance criteria.

3.34. Specification – A document stating specific requirements related to a product or project.

3.35. Specimen - A sample used in practical examinations, which may include Welded Joints, radiographs and data sets, and which are representative of products typically tested in the applicable sector, and which may include more than one area or volume to be tested.

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3.36. Specimen Master Report – A report containing model answer, indicating the optimum result for a practical examination given a defined set of conditions (equipment type, settings, technique, specimen ID, etc.), against which the candidate's test report will be assessed & graded.

3.37. Supervision – Guiding & directing the personnel in application of NDT performed by his team, which includes the control of actions involved in the preparation for the test, setting up / calibration of equipment & performance of the test and reporting of the results.

3.38. Validation - Demonstrating that a verified procedure will work in practice and fulfil its intended function, normally achieved by actual witnessing, demonstration, field or laboratory tests or selected trials.

3.39. Written Practice – Documented procedure detailing the employer's specific requirements for qualification, certification and authorization of NDT employees.

4. Abbreviations:

The following are the abbreviations used within this document or its appendices:

AEC Authorised Examination centres

ATO Approved Training Organisations

AUT Automated Ultrasonic Testing

BRS Basic Radiation Safety

MEENA: - Meena International (the certification body)

CB Certification Body

ET Eddy Current Testing

MT Magnetic Testing

NDT Non-Destructive Testing

OTJ on-the-job (Training)

PAUT Phased Array Ultrasonic Testing

PT Penetrant Testing

QA Quality Assurance

QC Quality Control

RI Radiographic Interpreter

RPS Radiation Protection Supervisor

RT Radiographic Testing

TOFD Time of Flight Diffraction

UT Ultrasonic Testing

VT Visual Testing

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5. Duties and responsibilities:

5.1. The Certification Body (MEENA)

5.1.1. MEENA will fulfil the requirements of ISO/IEC 17024 and, will ensure that the IPC Scheme(s) for qualification and certification of NDT personnel, and the assessment and certification of systems, are controlled and operated so as to ensure that they are impartial, and that decisions taken and implemented at all levels, including management and committees, are free from commercial or other pressures that may prevent the objective of provision of Certification Services.

5.1.2. MEENA will establish Examination Centres (AECs) where IPC examinations are conducted under direct control of Meena.

5.1.3. MEENA shall ensure that information obtained during the certification process, or from sources other than the applicant, candidate or certified person, is not disclosed to anyone without the written consent of the individual concerned (applicant, candidate or certified person), except where the law of the land requires such information to be disclosed.

5.1.4. When MEENA is required by law to release confidential information, the person concerned shall, unless prohibited by law, be notified as to what information will be provided.

5.2. The employer.

5.2.1. The employer shall introduce the candidate to the certification body and document the validity of the personal information provided. This information shall include the declaration of education, training and experience and visual acuity needed to determine the eligibility of the candidate. If the candidate is unemployed or self-employed, the declaration of education, training and experience shall be attested to by at least one independent party (such as his / her client or Third Party certifying Agency under whom they are working) acceptable to the certification body.

5.2.2. Neither the employer nor his staff shall be directly involved in the qualification examination.

5.2.3. Where required by regulatory requirements and codes, the authorisation to operate must be given in writing by the employer in accordance with a Written Practice or Quality Procedure that defines any employer required job-specific training and examinations designed to verify the certificate holder's knowledge of relevant industry code(s), standard(s), NDT procedures, equipment, and acceptance criteria for the products tested.

5.2.4. The employer shall ensure that candidates gaining experience for certification are supervised by Appropriately Qualified Personnel.

5.2.5. Regarding certificated persons, the employer shall be responsible for:

- Providing job specific training and issue authorization to operate, as required by company policy.
- Maintain records of the results of NDT operations;
- Verification of visual acuity in accordance with IPC requirements & maintain records
- Verifying continuity in the application of the NDT method without significant interruption;
- Ensuring that personnel hold valid certification relevant to their tasks within the organisation;
- Maintaining all appropriate records.

5.3. All Candidates taking IPC Examination, employed, self-employed or unemployed shall:

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5.3.1. Provide documentary evidence of satisfactory completion of a course of training at an Meena's Independent Training Division or an ATO approved by MEENA;

5.3.2. Provide documentary evidence that the required experience has been gained under qualified supervision which will be verified at random by Meena

5.3.3. Sign as a token of acceptance to abide by the Meena's Code of Ethics for candidates and IPC Certificates holders

5.3.4. Provide documentary evidence or take visual acuity test of vision satisfying the IPC requirements.

5.3.5. Sign IPC Rules of Examination sheet indicating their commitment not to release confidential examination materials or participate in fraudulent test-taking practices.

5.3.6. Inform IPC of any significant interruption that will affect the scope of his/her certification.

5.3.7. Assume all the responsibilities described for the employer if self-employed.

5.4. Certificate holders shall:

5.4.1. Read, Sign & undertake to abide by the Code of Ethics published by Meena.

5.4.2. Undergo an annual test of visual acuity in accordance with IPC Requirements and submit the results of tests to the employer for records.

5.4.3. Notify MEENA Certification Services and the employer in the event that the conditions for validity of IPC certification (see clause 17) are not fulfilled

6. Levels of IPC certification:

6.1. Level 1

6.1.1 An individual certified to Level 1 has demonstrated competence to carry out 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 authorised by the employer to perform the following in accordance with NDT instructions:

- set up NDT equipment;
- perform the tests;
- record and classify the results of the tests according to written criteria;
- report the results.

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

6.2. Level-2

6.2.1. 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 authorised by the employer to:

- select the NDT technique for the test method to be used;
- define the limitations of application of the testing method;
- translate NDT codes, standards, specifications and procedures into NDT instructions adapted to the actual working conditions;

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- set up and verify equipment settings;
- perform and supervise tests;
- interpret and evaluate results according to applicable standards, codes, specifications or procedures;
- prepare written NDT instructions
- carry out and supervise all tasks at or below level 2;
- provide guidance for personnel at or below level 2, and
- report the results of non-destructive tests.

6.3. Level 3

6.3.1 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:

- the competence to evaluate and interpret results in terms of existing standards, codes, and specifications;
- 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;
- a general familiarity with other NDT methods to the extent of Level-2 standard.

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

- assume full responsibility and lead a test facility or examination centre and staff;
- establish, review for editorial and technical correctness and validate NDT instructions and procedures;
- interpret codes, standards, specifications and procedures;
- designate the test methods, techniques and procedures to be used;
- within the scope and limitations of any certification held (see clause 6.3.4), carry out all tasks at all levels, and
- supervise and provide guidance for NDT personnel at all levels.

6.3.3 Level 3 certificated personnel may be authorised to carry out, manage and supervise IPC qualification examinations on behalf of Meena International.

6.3.4 Where Level 3 duties require the individual to apply routine NDT by a method or methods within a product or industry sector, it is desirable that industry demand that this person should hold and maintain Level 2 certification in the applicable method(s) and sector(s), however the final decision is left with the employer.

7 Eligibility:

7.1. The candidate shall fulfil the minimum requirements of vision acuity (near vision) colour perception tests and training prior to taking qualification examination and shall fulfil the minimum requirements for industrial experience prior to certification.

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7.2. Training:

7.2.1 To be eligible for examination the candidate shall provide documentary evidence successful completion of a validated course of training at a MEENA's Training Division or Meena approved Training Organization (ATO). This should cover the relevant part of the published syllabus (CEN ISO/TR 25107), that he has satisfactorily completed training in the method and level for which the certification is sought.

7.2.2 For all levels, the candidate shall satisfactorily complete a course of theoretical and practical training recognized by MEENA

Where IPC examinations are to be conducted for candidates in an overseas location and MEENA validated training is not available through a MEENA ATO, a training course that is equivalent to the IPC approved syllabus may be granted interim recognition for up to five years subject to MEENA's approval as meeting IPC / ISO-9712 requirements for pre-certification training. For mature candidates, with at least 5 years and above documented experience without significant interruption (see definitions) in the NDT method and sector for which certification is sought, who can provide evidence of completion of a course of training (covering the relevant syllabus) which was of at least the duration specified in Table 1, the need to have attended a Meena approved course of training may be waived. Such candidates should apply to the MEENA directly as 'mature candidates', attaching evidence of that status. If a significant interruption in continuity in the application of the NDT method exists, the candidate shall undertake further training determined by MEENA.

For Level 3, in addition to the minimum training given in Table 1, the preparation for qualification can be completed in different ways dependent on the scientific and technical background of the candidate, including attendance at other training courses, online training, conferences or seminars, studying books, periodicals and other specialized printed or electronic materials. The requirements of training needs are assessed on case by case basis.

7.2.3 The minimum duration of training undertaken by the candidate for certification shall be as defined in 7.2.4 and Table 1 for the respective NDT method in line with the requirements of ISO-9712, with the possible reductions as defined in clause 7.2.5:

This duration is based on candidates possessing adequate physics & mathematics skills and fundamental knowledge of materials and processes. If it is not the case, additional training may be required by as directed by MEENA.

Training hours include both practical and theoretical training sessions.

7.2.4 Direct access to Level 2 requires attending the total hours of training shown in Table 1 for Levels 1 and 2. Direct access to Level 3 requires the total hours shown in Table 1 for Levels 1, 2, and 3. When considering the responsibilities of a certified Level 3 (see 6.3) and the content of Part C of the basic examination for Level 3 (see Table 4), additional training about the other NDT methods may be necessary.

Table 1 – Minimum Required Durations of Classroom Training Hours:

NDT Method	Level 1 hours	Level 2 hours	Level 3 hours
Basic Product Technology	8	8	12 <i>(Note-1)</i>
ET - Welds	40	48	48
PT	16	24	24

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MT	16	24	32
RT	40	80	40
RI	N/A	56	N/A
UT	40	80	40
PAUT	40	80	24
ToFD – UT	40	80	24
BRS	16	N/A	N/A
RPS	N/A	24	N/A
<i>NOTE: For RT, training hours do not include basic radiation safety training</i>			

7.2.5 The possible reductions in training duration are as described hereafter, provided that, when several reductions are applicable, the total reduction does not exceed 50 % of the training duration. Any reduction requires acceptance by the certification body.

a) For all levels:

- for candidates seeking certification in more than one method (e.g. MT, PT), or for those already certified and seeking certification in another method, when the training syllabus concerned duplicates certain aspects (e.g. product technology), the total number of training hours for these methods (e.g. PT, MT, VT) may be reduced in line with the training syllabus;
- for candidates who have graduated in a relevant subject (physics or mechanical / metallurgical engineering) from technical college or university, or have completed at least three years of relevant diploma in engineering or science study at college or university, the total required number of training hours may be reduced by up to 50 %.

NOTE-1: It is appropriate for the subject to be relevant to the NDT method (chemistry, mathematics or physics) and/or to the product or industry sector (chemistry, metallurgy, engineering, etc.). Basic knowledge (direct access to Level 3 examination parts A, B and C)

NOTE-2: The 80 hours training required for Level 3 Basic qualification may be accrued through a combination of classroom training at a MEENA or its approved training organisation (minimum 50%), self-study and distance learning. However, accrued, candidates should record the training undertaken for presentation to IPC if requested. This note relates to the Level 3 Basic Examination and reductions in training duration up to 72 hours maximum, may be granted based on holding:

The reduction in training hours out of total 80 are available for candidate appearing for Level-3 Basic who holds a certificate covering:

Sl. No.	Certification Held	Reduction in training hours
1.	ASNT / ACCP Level-3	64
2.	IPC Basic Product Technology	12
3.	Other Schemes complying ISO-9712 requirements Multi sector	12
4.	Holding 4 or more IPC or ISO 9712 compliant Level-2	60 *

Note: * 15 Hours reduction per ISO-9712 compliant NDT Level-2 certification held

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b) For Levels 1 and 2, when the certification sought is limited:

— in application (e.g. automated ET, UT of bar, tube, and rod or normal beam ultrasonic thickness and lamination testing of rolled steel plate);

c) For direct access to Level 2 RT when certification is restricted to the film interpretation and to only one product sector, a minimum training requirement of 56 hours applies.

7.3. Industrial NDT Experience

7.3.1 General

7.3.1.1 The minimum duration of experience to be gained in the sector where the candidate is seeking certification shall be as given in Table 2, with the possible reductions given in clause 7.3.3. When the candidate is seeking certification in more than one method, the total time of experience shall be the sum of the experience in each method.

7.3.1.2 For Level 2 certification, the intent of IPC scheme is that work experience consists of time as a Level 1. If the individual is being qualified directly to Level 2, with no time at Level 1, the experience shall consist of the sum of the times required for Level 1 and Level 2. No reduction in the period of experience shall be allowed

7.3.1.3 IPC has provisions for Industrial NDT experience in the appropriate sector that may be acquired either prior to or following success in the qualification examination for personnel meeting the minimum educational qualification requirements.

7.3.1.4 In the event that the experience is sought following successful examination, the results of the examination shall remain valid for up to 24 months from the date of examination.

7.3.1.5 Documentary evidence (in a form acceptable to Meena International, i.e., on IPC form No-29 of experience satisfying the following requirements) shall be confirmed by the employer and submitted to the MEENA prior to examination, or award of IPC certification in the event that experience is gained after examination.

7.3.1.6 Level 3 candidates shall have the required amount of NDT experience prior to taking any examination.

The minimum duration of experience for certification shall be as defined in *Table 3*.

Table 3: Minimum Duration of Experience for certification:

NDT Method	Experience (months) ^a		
	Level 1	Level 2	Level 3
ET, RT, UT,	3	9	36
MT, PT, VT	1	3	24
RI	N/A	6	N/A
PAUT	1	2	9
ToFD	3	9	12
<small>a Work experience in months is based on a nominal 40 hours/week or the legal week of work. When an individual is working in excess of 40 hours per week, he may be credited with experience based on the total hours, but he shall be required to produce evidence of this experience.</small>			

7.3.2 Level 3:

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7.3.2.1 Level 3 responsibilities require knowledge beyond the technical scope of any specific NDT method. This broad knowledge may be acquired through a variety of combinations of education, training and experience. Table 3 details minimum experience for candidates who have successfully completed a technical school or at least two years of engineering or science study at an accredited college or university. If this is not the case, the duration has to be multiplied by a factor of 2.

7.3.2.2 For Level 3 certification, the intent of this International Standard is that work experience consists of time as a Level 2. If the individual is being qualified directly from Level 1 to Level 3, with no time at Level 2, the experience shall consist of the sum of the times required for Level 2 and Level 3. No reduction in the period of experience shall be allowed.

7.3.3 Possible Reductions:

7.3.2.1 The possible reductions in duration 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 does require acceptance by the Meena.

When considering possible reduction in the duration of experience, the certification body should take into consideration the following elements.

- The quality of experience can be variable, and skills may be assimilated more quickly in an environment where the experience is concentrated and has a high degree of relevance to the certification sought.
- When gaining experience simultaneously in two or more surface NDT methods, i.e. MT, PT and VT, the experience gained in the application of one NDT method may be complementary to the experience gained in one or more other surface methods.
- Experience in one sector of an NDT method for which certification is already held may be complementary to the experience in a different sector of the same NDT method.
- The level and quality of education possessed by the candidate should also be considered. This is particularly the case for the Level 3 candidate but it can also be applicable for other levels.
- For candidates who has completed two years full time Engineering Master Degree in NDT from a recognised universities / institutes and has spent the full second year as internship in an industry in NDT area can take up to level-2 examinations directly and the one-year internship with supporting documents will be considered as experience gained.

7.3.3.2 Credit for work experience may be gained simultaneously in two or more of the NDT methods covered by this International Standard, with 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 required time by 50%.

In all cases, the candidate shall be required to show that for each of the testing methods for which they seek certification, they have a minimum of 50% of the time required in Table 3

7.3.3.3 In all cases, the candidate shall be required to show that for each of the NDT method and 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.

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7.3.3.4 When the certification sought is limited in application (e.g. thickness measurement or automated testing), experience duration may be reduced by up to 50% but shall not be less than one month.

7.3.3.5 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 maximum factor of 5. This procedure shall not be used in conjunction with that specified in 7.3.3.4. The course shall concentrate on practical solutions of frequently occurring testing problems and should involve a significant element of testing known defective specimens. The procedure will be approved by MEENA.

7.4. Vision Requirements – All Levels:

The candidate shall provide documentary evidence of satisfactory vision in accordance with the following requirements:

7.4.1. The IPC requirements for colour perception and acuity of vision, together with the qualifications of those administering the vision tests, are fully defined in IPC document Form No.32, which includes a form for recording the results of vision tests. The requirements are reproduced below for easier understanding:

7.4.2. Candidates for IPC examinations will be required, on the day of the examination, to provide proof of a satisfactory vision test conducted within the 6 months preceding the examination.

7.4.2.1. Near vision acuity shall permit reading a minimum of Jaeger number 1 or Times Roman N 4.5 or equivalent letters (having a height of 1,6 mm) at not less than 30 cm with one or both eyes, either corrected or uncorrected;

7.4.2.2. 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 as specified by the employer.

NOTE: Subsequent to certification, the documented tests of visual acuity shall be carried out at least every twelve months and verified by the employer.

8. Qualification Examination:

8.1 General:

An examiner shall not be permitted to be the examiner for all candidates trained by him for that examination, or who is employed in the same organization as the candidate.

Note: only MEENA authorises examiners and invigilators within the IPC Scheme, and all examination personnel are required to declare any interest in a candidate that presents for examination. In case of doubt regarding maintenance of impartiality, the examiner shall consult with Certification Services Manager before conducting examinations.

8.1.2. Examination Application

8.1.2.1. Initial enquiries to the MEENA may be by telephone. Formal applications must be made on an application form No. 27 available direct from MEENA only. No examination appointment can be considered confirmed until a correctly completed application form has been received.

8.1.2.2. Application forms ask for specific details on experience and training to the published syllabus and must be signed to the effect that these details are correct. In the event of a false statement being discovered, any certification awarded as a result of the examination will become null and void.

8.1.2.3. Applications dependent upon the individual holding appropriate certification must be supported by acceptable evidence of such certification; photocopies are acceptable at this stage,

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but original certificates, together with proof of identity, shall be presented to the examination invigilator on the date of examination. Failure to comply with this requirement will lead to cancellation of examination appointment.

8.1.2.4. The location of all examination points is published in Meena's URL, and copies are available from Meena International HQ in Chennai.

8.1.2.5. Provision is made wherever possible for candidates with a disability which may affect their ability to complete IPC examinations. For example, up to 25% additional time may be allowed in examinations for candidates suffering from dyslexia. The candidate is responsible for bringing his or her disability to the attention of the Meena.

8.1.3. Examination Equipment and Documentation

8.1.3.1. MEENA will provide all necessary NDT equipment although candidates may bring and use their own equipment by prior arrangement with the Meena. Any item of apparatus brought by a candidate that is unreliable or rendered unserviceable during the examination shall be replaced by the candidate. Guidance on suitable equipment is available directly from MEENA.

8.1.3.2. Digital Equipments' capable of storing calibration details, formulae or data relevant to NDT must shall be deleted prior to attempting any IPC practical examination using that instrument. The same shall be verified by the examiner / invigilator and, in the event that they are not satisfied that data removal is not effective, the candidate may be required to use equipment provided by the Meena or be refused examination.

8.1.3.3. All necessary reference standards will be provided by the MEENA. Candidates must not be in possession of any reference standards, other than those provided by Meena, during a IPC examination.

8.1.3.4. Provided security of examination materials are protected, candidates will be allowed the use of a Meena provided PC or lap-top computer in the NDT instruction and NDT procedure writing section of the IPC examination. On no account will the use of a candidate's own computer be permitted during a IPC examination and, for reasons of security, candidates are not permitted to bring any form of computer, including hand-held devices (PDAs, etc.) into the examination facilities at a IPC Examination Centre. The provision of computers for candidate use is optional for any MEENA.

8.1.3.5. The use of a pocket calculator is permissible in IPC examinations provided that it is non-programmable or a type that does not permanently store programs, formulae or data relevant to NDT.

8.1.3.6. Mobile telephones, audio, video or other recording devices are not permitted in any IPC examination area.

8.2. Qualification Examination Content& Grading for Levels 1 and 2:

Process of Examination Sections:

- The qualification examination consists of written general and specific parts, and a specific practical examination covering a given NDT method applied to specimens' representative of products in one or more industrial sectors.
- The general and specific written examinations are comprised mainly of multi-choice answer questions (exceptions being the radiation protection and the instruction & procedure writing examinations).

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- The time allowed to the candidates for completion of each examination shall be based upon the number and difficulty of the questions. The average time allowed shall be no less than one minute nor longer than two minutes per multiple choice question. The time allowed for examinations comprised of narrative answer questions varies but is specified on the examination paper presented to the candidate.
- The practical examination is of sufficient duration, complexity and scope adequately to verify the candidate's ability to apply the NDT method to real test situations. The time allowed for the practical examination is detailed in the appropriate Annexure to these general requirements.

8.2.1. General Examination:

The general examination includes only validated questions selected in an unpredictable way from the collection of general questions approved by Meena International at the time of the examination. The number of questions in each NDT method general examination is as defined in *Table 4*.

For all Indian nationalities taking RT (all levels) holding a valid RT1 certificate issued by Baba Atomic Research Centre (BARC), Department of Atomic Energy, Ministry of Defence, Union Government of India is considered meeting the requirement of Basic Radiation Safety. Other nationality shall hold a valid national equivalent recognised by concerned regulatory authority in their country of origin or employment. Other has to take BRS L-1 as a prerequisite.

Table 4 – Required Minimum Number of Questions – General Examination:

NDT Method	Number of Questions / <i>Time Allowed</i>
Basic Product Technology	15 <i>Questions & 30 Minutes</i>
ET, RT, UT	40 <i>Questions & 80 Minutes</i>
MT, PT, VT	30 <i>Questions & 60 Minutes</i>
Basic Radiation Safety (L-1)	30 <i>Questions & 60 Minutes</i>
Radiation Protection Supervisor (L-2)	20 + 4 Descriptive answer & calculations <i>Total all-inclusive time 2 Hours</i>

Selection of Questions will be as detailed in Annexure – 1 to this document:

All personnel attempting level 1 & level 2 examination shall take and pass the Basic Product Technology to become eligible for taking method examination. The results are valid until the candidate clears one method examination or 5 years whichever is earlier.

Meena reserve the right increase the number of General Questions for Level-2 MT, PT & VT to 40 if requirement arises.

8.2.2. Specific Examination:

The specific examination includes only validated questions selected in an unpredictable way from the collection of specific questions approved and retained by Meena International at the time of the examination.

All Level 1 & 2 Specific Theory Papers shall have 20 questions. The Basic Product Technology 15 questions need to be passed one time only and valid for all sectors & any number of methods.

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During the specific examination, the candidate shall be required to answer multiple-choice questions, including questions involving calculations, written procedures and questions on product technology, codes, standards and specifications.

If the specific examination covers two or more product sectors, the questions will be evenly spread between the sectors concerned. Multi Sector Level 1 & 2 specific papers will contain 10 additional questions with a minimum of 10 questions from each sector.

PAUT & ToFD are considered as sectors in UT and candidates appearing for PAUT & ToFD shall hold a valid Conventional UT in respective level and they need not take General Examination. They will be considered passing the general examination and awarded 70% marks.

8.2.3. Practical Examination (see guidelines for examiners for information on grading)

8.2.3.1. The practical examination is designed to hands on practical skills of the candidate to:

- make the required equipment settings;
- familiarity to operate the test equipment properly;
- perform testing of given specimen(s) relating to the industrial sector concerned;
- record and to analyse the resultant information to the degree required according to written instructions for Level 1 or a code, standard, specification or a procedure for Level 2.

The specimens used for the practical test will be selected from a collection of representative specimens approved by MEENA. Each test specimen shall contain one or more of the discontinuities defined in CEN/TS 15053.

8.2.3.2 Specimens will be uniquely identified and have a master report which includes all of the equipment settings used to detect specified discontinuities contained within the specimen. The master sheet is compiled based upon at least two independent tests, and is validated by an authorised examiner holding ASNT/ACCP/ISO-9712 Level 3 for use in grading IPC examinations. The independent test reports from which the master report is compiled shall be retained as records.

Specimens contain discontinuities characteristic of those that occur during manufacturing or in service. They may be natural, artificial or implanted. For practical radiography, the specimen will not necessarily contain discontinuities since these will be exhibited in the radiographs for interpretation.

8.2.3.3 Specimens designed be sector specific, simulating field geometries and shall contain discontinuities representative of those likely to occur during manufacturing or in service. They are natural, artificial and implanted. For Level 2 evaluation tasks, data sets or films can be used instead of real specimens.

For RT, the specimen may or may not contain discontinuities since these are exhibited in the radiographs for interpretation.

8.2.3.4 The number of areas or volumes to be tested and the time allowed during the practical examination will be adequate to the level and NDT method, and to the sector concerned, and is defined in the relevant Annexure to this specification.

8.2.3.5 The Level 1 candidate will follow the NDT instruction(s) provided by the examiner.

8.2.3.6 The Level 2 candidate will select the applicable NDT technique and determine the operating conditions related to a given code, standard, or specification.

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8.2.3.7 For those examinations where discontinuities are normally replaced by artificial sources or data, the level 1 candidate shall demonstrate the ability to set up the equipment, verify its sensitivity and record the test data; the level 2 candidate shall also demonstrate the ability to interpret and evaluate previously recorded test data.

8.2.3.8 The time allowed for the examination depends on the number of specimens and on their complexity. The average time allowed shall be defined by the certification body. The recommended maximum time allowed for each area or volume tested. They are given in the respective annexures.

8.2.3.9 For Level 2 the candidate will demonstrate the ability to prepare written instructions for Level 1 for a specimen selected by the examiner. This will be an open book examination where the candidate is provided with the relevant standard, code or specification and a copy of Table D.1 of ISO 9712: 2017. *The maximum time permitted will be 2 Hours for this part.*

The maximum time allowed per specimen will be 3 Hours for Level-2 & 2 Hours for Level-1. The actual time allowed will be decided by the concerned examiner on case by case basis and the minimum will be 1 hour for Level-1 & 2 Hours for Level-2. (ISO 9712 8.2.3.8)

8.2.4 Grading for Level-1 and Level-2 Qualification Examination:

8.2.4.1 The general, specific and practical examinations shall be graded separately. When conventional pre-prepared paper-based examinations are used, an examiner shall be responsible for the grading of the examinations by comparison with model answers.

At the option of MEENA, e-assessment systems that automatically score candidate responses against stored data and grade the completed written examination according to prepared algorithms may be used at the discretion of Meena.

8.2.4.2 Grading of IPC practical; examinations are done as required by ISO 9712: 2012 section 8.2.4.2.

8.4.3.3 The pass mark for each examination part, and for levels 1 and 2, for each examination specimen tested, is 70%. To be eligible for certification, the candidate shall obtain a minimum grade of 70% in each part of the examination (general, specific, and practical). In addition, for the practical examination, a minimum grade of 70% shall be obtained for each specimen tested, and for the NDT instruction, as applicable.

8.2.4.4 The general and specific parts of the examination are graded by comparing the replies given by the candidate against answer keys approved by Meena. Each correct reply scores 1 point and the mark attributed to the tests is the sum of the points obtained. For the final calculation, the mark of each test is expressed as a percentage.

8.2.4.5 For the Level 2 candidates, the specimen for which the instruction is produced shall be graded with an overall grade of 100 in accordance with Table D.1. The other specimens (without instruction) shall be graded with an overall grade of 85 in accordance with Table D.1 (see 8.2.4.2), and the final grade shall be calculated by multiplying by 100/85. The instruction shall be graded with an overall grade of 15 in accordance with Table D.1 (see 8.2.4.2), and, for comparing with the 70 % required in 8.2.4.3, this value shall be multiplied by 100/15.

8.3 Examination Content and Grading for Level-3:

8.3.1. General

All candidates for level 3 certification in any NDT method shall have successfully completed (with a grade of $\geq 70\%$) the practical examination for level 2 in the relevant sector and method, except for the drafting of NDT instructions for level 1 (see 8.2.3.9).

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A candidate who is holding a valid level 2 in the same product sector, or has successfully passed a level 2 practical examination for the method in an industrial sector (e.g. PAUT) in which the product is commonly tested (e.g. weldments and wrought products), is exempt from passing again the level 2 practical examination. This exemption is only valid for the product sectors covered by the industrial sector concerned and, in any other circumstances, the relevant sector is the sector in which the candidate seeks level 3 certification.

8.3.2. Basic Examination.

8.3.2.1 Basic Examination questions shall be selected from the current collection of questions approved by MEENA at the time of the examination. The number of questions set will be as defined in Table 5. This written examination is to test the basic knowledge of the candidate.

Note: - All the questions are of the multiple-choice answer type. The total time allowed for this examination is 3 hours and 20 minutes.

Table – 6 Minimum required number of basic questions:

Part	Subject	Number of Questions
A	Technical knowledge in materials science and process technology including welds, casting & wrought products	25 Time Allowed 50 Mts.
B	Test of Certification knowledge based on this document and ISO-9712 current edition (Open Book)	15 Time Allowed 30 Mts.
C	General knowledge of at least four methods as required for Level 2 and chosen by the candidate from the methods given in Clause 1. These four methods shall include at least one volumetric method (UT or RT). 15 x 4	60 Time Allowed 120 Mts.

Selection of Questions will be as detailed in Annexure – 1 to this document:

8.3.2.2. Passing basic examination is mandatory for all Level-3 aspirants and shall be passed first. The result will remain valid, until the first main method examination is passed provided this is achieved within five years after passing the basic examination. Candidates need to clear basic one time only.

8.3.3: Main Method Examination:

This written examination shall assess the candidate's knowledge of the main method subjects using the minimum required number of multiple choice questions shown in Table 7. Examination questions shall be selected in an unpredictable way from the current collection of questions approved by the Meena at the time of the examination.

Table – 7: Minimum Required Number of Main Method Examination Questions

Part	Subject	Number of Questions
D	Level 3 knowledge relating to the test method applied	30 Time Allowed 60 Mts.
E	Application of the NDT method in the sector concerned, including the applicable codes, standards, and specifications. This may be an open book examination in relation to codes, standards, and specifications.	20 Time Allowed 40 Mts.

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F	<p>Drafting of one or more NDT procedures in the relevant sector. The applicable codes, standards, and specifications shall be available to the candidate. (Open Book)</p> <p>For a candidate who has already drafted a NDT procedure in a successfully passed Level 3 examination, MEENA may replace the drafting of a procedure with the critical analysis of an existing NDT procedure covering the relevant method and sector, and containing errors and/or omissions.</p>	Time Allowed 240 Mts.
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Selection of Questions will be as detailed in Annexure – 1 to this document:

8.3.4: Grading of Level-3 Qualification Examinations:

8.3.4.1: General:

The grading of the basic and main method examinations will be done separately. To be eligible for certification, a candidate shall pass both the basic and at least one main method examination.

For the three parts A, B, and C of the basic examination and parts D and E of the main method, the following requirements are to be achieved to become eligible for Level-3 Certification.

When conventional pre-prepared paper-based examinations are used, an examiner shall be responsible for the grading of the examinations by comparing the replies given by the candidate against answer keys approved by the certification body. Each correct reply scores 1 point and the mark attributed to the tests is the sum of the points obtained. For the final calculation, the mark of each test is expressed as a percentage.

At the option of the Meena, e-assessment systems that automatically score candidate responses against stored data and grade the completed written examination according to prepared algorithms may be used at a later stage.

8.3.4.2: Basic Examination:

In order to pass the basic examination, the candidate shall obtain a minimum grade of 70% in each of parts A, B & C.

8.3.4.3: Main Method Examination:

In order to pass the main method examination, the candidate shall obtain a minimum grade of 70% in each of parts D, E & F. ISO-9712: 2012 Table D.2

The Level 3 Main Method examination shall not be graded until such time as the candidate has been successful in the Level 3 Basic examination.

8.4. Conduct of Examinations

8.4.1. General: All examinations will take place only in Meena's HQ and Teste Centres operated directly by Meena International and controlled by HQ.

8.4.2. At the time of examination, the candidate shall have in his or her possession valid proof of identification and an official notification of the examination, which shall be shown to the examiner or invigilator upon demand.

The following ID Proofs are Acceptable to Meena:

- Valid Passport
- Valid Driver's Licence

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- Valid Aadhar Card
- Valid PAN card
- Valid Voter ID
- Personnel ID cards issued by Government & Corporate Companies

Note: Candidates are allowed to use only stationeries provided by the examination centre. Use of a nonprogrammable scientific calculator if authorised examiner may be used during a qualification examination.

8.4.3. Any candidate who, during the course of the examination, does not abide by the examination rules or who perpetrates, or is an accessory to, fraudulent conduct shall be excluded from all further qualification examinations for a period of at least one year.

8.4.4. Examination questions shall be validated by the Meena. When conventional pre-prepared paper-based examinations are used, the examination papers shall be validated and approved by an examiner, and the grading shall be done in accordance with procedures approved by MEENA. When e-assessment systems that select questions present the “written” examination to a candidate on a computer and grade the examinations, are used, the certification body shall validate and approve the e-assessment system.

8.4.5. Written (whether e-assessment or conventional) and practical qualification examinations shall be invigilated by an examiner or by one or more trained invigilators placed under an examiner’s responsibility.

8.4.6. An examiner shall not be permitted to examine any candidate:

- that he has trained for the examination for a period of two years from the date of the conclusion of the training activities;
- who is working (permanently or temporarily) in the same facility as the examiner.

8.4.7. With prior approval from Meena a candidate may use his own equipment for practical examinations.

8.4.8. Candidates shall not be permitted to bring into the examination area personal items, unless specifically authorized to do so by the examiner.

8.5. Re-examination

8.5.1. A candidate whose examination result(s) have been withheld for reason of fraudulent act or unethical behaviour shall wait at least 12 months before re-applying for any IPC examination.

8.5.2. A candidate who fails in an examination part (general, specific or practical), may be re-examined a maximum of two times in order to achieve a pass grade of 70%, provided the re-examination takes place not sooner than one month, unless further training acceptable to MEENA (see 7.2) is satisfactorily completed, nor later than 2 years after the original examination.

NOTE: “Examination parts” in this context refers to: for Levels 1 and 2, the general, specific, and practical examinations; for the Level 3 basic examination, Parts A, B, and C; for the Level 3 main-method examination, Parts D, E, and F.

8.5.3. A candidate who fails all permitted re-examinations shall apply for and the initial examination according to the procedure established for new candidates.

8.6. Examination Exemptions:

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8.6.1. A certified Level 1 or Level 2 individual changing sectors or adding another sector for the same NDT method shall be required to take only the new sector specific and practical examinations for that method.

8.6.2. A certified Level 3 individual changing sectors or adding another sector for the same NDT method is exempt from the need to retake the basic examination and the Level 3-part D of the main method examination (see Table 7).

8.6.3. Persons holding a valid ASNT / ACCP Level-3 Certificate appearing for IPC Level-2 will be exempted from Product Technology and General Examination, IPC Level-3 Parts A, C of General Examination and Part D of Specific Examination for methods in which they hold Level-3 Certificate. The candidate need to make a formal request for such exemption in appropriate form.

9. Certification:

9.1. Administration:

All successful candidates meeting certification criteria will be issued a IPC Certificate of Proficiency. This certificate will have all conditions for certification, as detailed in this specification document, are met. Issue of certification normally takes place within 4 weeks of MEENA receiving all examination paper work from the assigned examiner. However, where a candidate for certification has achieved a pass in all relevant examination parts, but has not yet satisfied the pre-requisite experience and vision requirements, the issue of certification may be deferred for up to two years from the date of success in the IPC examination for achieving the requirements.

9.2. Certificates and / or Wallet Cards:

The IPC Certificate of Proficiency and/or corresponding wallet card includes the following as a minimum:

- a) the family name and the given name of the certified individual;
- b) the effective issue date of certification;
- c) the date upon which certification expires;
- d) a statement referring compliance to ISO 9712:2012
- e) the level of certification;
- f) the NDT method(s);
- g) the applicable sector(s);
- h) the specific scope of the competence indicating limitation if any;
- i) unique IPC identification number;
- j) provision for the signature of the certificated individual;
- k) a photograph of the certificated individual on the wallet card.
- l) Meena's Cold Seal on the certificate and a tamper proof ID Card
- m) the signature of representative authorised by Certification Manager
- n) a provision endorsement by employer to operate

NOTE: By issuing the certificate and/or the corresponding wallet card, Meena International attests to the qualification of the individual and any authority to operate is the responsibility of the employer.

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9.3. Digital Certificates:

9.3.1. Meena will in consultation with legal experts will explore the possibilities of issuing digital certificates in lieu of hard copy certificate(s) without violating national & international statutory requirements. However, the following information will be made available in Meena's URL:

- the legal name, contact information and, where applicable, accreditation status of the certification body;
- the family name and given name of the certified individual;
- a unique personal identification number for the certified individual;
- the dates of issue and expiry of the certification;
- the scope of certification, including the level, NDT method(s), and applicable sector(s);
- any limitations to the certification, if applicable.

9.3.2. The data listed in 9.3.1 can be printed directly from Meena's website, the printed output will by default include a date of print and a statement that the current certification status can be verified at the relevant website.

9.4. Validity:

9.4.1. General:

The period of validity of the initial certification is five years from the date of certification. The expiry date is indicated on the certificate and/or wallet card.

Certification becomes invalid:

- a) at the discretion of the certification body, e.g. after reviewing evidence of behaviour incompatible with the certification procedures or failure to abide by a code of ethics;
- b) if the individual becomes physically incapable of performing his duties based upon failure of the visual acuity examination taken annually under the responsibility of his employer;
- c) if a significant interruption takes place in the method for which the individual is certified;
- d) if the individual fails recertification, until such time as the individual meets the requirements for recertification or initial certification.

9.4.2. Revalidation:

The certification will be re-instated with the fulfilment of the following conditions:

- a. Certificates with drawn based on clause 9.4.1, a: Based on the appeal by candidate if the impartiality committee declare the candidate not violating IPC requirements.
- b. Certificates with drawn based on clause 9.4.1b: When the candidate provide a Fitness Certificate issued by a Medical Specialist assuring that the candidate is fully recovered from the identified incapability and without significant interruption.

For revalidation of the certification after a significant interruption, the individual shall pass a recertification examination. The certification is revalidated for a new period of validity of five years from the date of the revalidation.

10 Renewal:

10.1 Prior to the completion of the first period of validity and every 10 years thereafter, certification may be renewed by Meena based on application for renewal of certification one time by filling in the prescribed Form No. 34 for a new period of five years on production of:

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- a) documentary evidence of a satisfactory visual acuity examination taken within the preceding 12 months;
- b) verifiable documentary evidence of continued satisfactory work activity without significant interruption

If the criterion b) for renewal is not met, the individual shall follow the same rules as for recertification by examination.

Holders of Level 1 or 2 certification who wish to add an additional category (where appropriate) at the same level will attempt a supplementary examination comprised of specific theory and/or specific practical parts. On successful completion of a supplementary examination, the certificate will be revalidated for a period of 5 years from the date of examination. Such supplementary examinations shall be taken at least 3 months prior to the expiry of the current certificate. This option can be used during initial as well as during the first renewed period.

10.2 It is the responsibility of the certificate holder to initiate the procedure required for renewal. The renewal files shall be presented within six months before the date of expiration of the certification. As an exception, and based upon decision of Meena, files presented within 12 months after the date of expiration may be considered. Over this period, no exception is admitted and the candidate shall be permitted to attempt a recertification examination.

11. Recertification:

11.1. General:

The recertification Process will be done in full compliance with the requirements of ISO/IEC 9712 & ISO/IEC 17024 requirements.

As a minimum the following parameters are evaluated before approving recertification:

- a. *A formal application for providing all information required is developed and made a public document.*
- b. *The candidates continued competence is assessed by point scheme as detailed in form number 34a & 34b and the assessment summary is listed in supporting document No. 5 of form 34a & 34b.*

Prior to the completion of each second period of validity (every 10 years), the certified individual may be recertified by Meena for a new period of five years or less, provided the individual meets the criterion for renewal specified in 10.1 a) and meets the applicable conditions described in the following.

It is the responsibility of certificate holders to initiate the procedures required to obtain recertification. If the recertification is applied for, more than 12 months after expiry of the period of validity, a complete examination (general, specific, and practical) for Level 1 and Level 2 and a main method examination for Level 3 shall again be passed successfully.

The following aspects also shall be considered for approval of recertification:

- a. *Regulatory requirements,*
- b. *Changes in ISO/IEC 9712 Requirements,*
- c. *Changes in ISO-TR 25107 (2006) Non-destructive testing — Guidelines for NDT training syllabuses,*

Adequate information shall be collected from the certified person applying for recertification to ensure that there is impartial assessment to confirm the continuing competence of the certified person and the requirements are addressed in form 34a & 34b.

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In addition to the above Meena reserve the right to exercise the following options:

- a. *Onsite assessment of practical competency (this may be substituted by asking the applicant to test a specimen associated to the products tested, in the Test Centre)*
- b. *Professional Development (refer point system for recertification for 34a & 43b)*
- c. *Structured Interviews (telephonic or in person)*
- d. *Confirmation of continuing satisfactory work & work experience records (addressed in form 34a & 34b)*
- e. *Examination (abbreviated recertification examination for candidates having uninterrupted work experience)*
- f. *Check on physical capability in relation to competence concerned (this is done by requiring a mandatory eye test and physical fitness certificate to be submitted with recertification application – form No. 32)*

11.2 Level 1 and 2

11.2.1 Levels 1 and 2 certificate holders seeking recertification shall meet the criterion for renewal specified in 10.1 b) and satisfy 11.2.2.

11.2.2 The individual shall successfully complete a practical examination which demonstrates continued competence to carry out work within the scope defined on the certificate. This shall include testing specimens (see Table B.1) appropriate to the scope of certification to be revalidated and in addition, for Level 2, the production of a written instruction suitable for the use of Level 1 personnel (see 8.2.3.9). If the individual fails to achieve a grade of at least 70 % for each specimen tested (weighted according to the guidance in Table 5), and, for Level 2, for the instruction, two retests of the whole recertification examination shall be allowed after at least 7 days and within six months of the first attempt at the recertification examination.

In the event of failure in the two allowable retests, the certificate shall not be revalidated and, to regain certification for that level, sector and method, the candidate shall apply for new certification. In this case, no examination exemptions shall be awarded by virtue of any other valid certification held.

11.3 Level 3

11.3.1 Level 3 certificate holders seeking recertification shall provide evidence of continued qualification confirmed by:

- a) satisfying the Level 3 requirements of 11.3.2 for a written examination;
- b) meeting the requirements for a structured credit system, as given in Annex C.

The individual may decide between the examination or credit system for recertification. If the credit system is chosen and requires submission of employer's documents or access to an employer's premises, the individual shall provide to Meena a written statement of approval from the employer.

In both cases (written examination or credit system), the individual shall either provide appropriate documented evidence, acceptable to Meena, of his continued practical competence in the method or pass a Level 2 practical examination, as specified in 11.2.2, except for the drafting of NDT instructions.

11.3.2 The individual shall successfully complete an examination that includes a minimum of 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, at the option of Meena, five additional questions on the requirements of the certification scheme / ISO-9712:2012.

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11.3.3 If the individual fails to achieve a grade of at least 70 % in the recertification examination, a maximum of two retests of the recertification examination shall be allowed. The time period within which all tests are to be taken shall be 12 months, unless otherwise extended by the certification body.

In the event of failure in the two allowable retests, the certificate shall not be revalidated and, to regain certification for that sector and method the candidate shall be required to achieve success in the appropriate main method examination.

11.3.4 A candidate who applies for and does not meet the requirements of the credit system shall be recertified in accordance with 11.3.2. In the event of failure at the first attempt at recertification by examination, only one retest of the recertification examination shall be allowed within 12 months of the date of application for recertification via the structured credit system.

12. Files

Meena International will maintain the following records as hard copies or in a digitised form as a minimum for one full certification cycle:

- an actual list or database of all certified individuals classified according to level, NDT method and sector;
- an individual file for each candidate who has not been certified, for at least five years from the date of application;
- an individual file(s) for each certified individual and for each individual whose certification has lapsed containing:
 - 1) photograph or digital image taken within the past 10 years,
 - 2) application forms,
 - 3) examination documents, such as questionnaires, answers, description of specimens, records, results
 - a) of test, NDT procedures, and grade sheets,
 - 4) renewal and recertification documents, including evidence of visual acuity and continuous activity,
 - 5) reason(s) for any withdrawal of certification.

Individual files shall be kept under suitable conditions of safety and confidentiality for as long as the certificate remains valid and for at least one full certification cycle after the certification has lapsed.

13. Transition period:

13.1 Meena will use the following at the time of initiation of the system when Meena applies the certification scheme to an NDT method, which is not yet covered within its scheme or when a new sector is created based on market demand. The certification body may temporarily appoint, for a period not exceeding five years from the date of implementation of the new method or sector, duly qualified personnel as examiners (see 3.9) for the purpose of conducting, supervising and grading the qualification examinations. The five-year implementation period is not to be used by the certification body as a means to certify candidates who do not meet all the qualification and certification requirements of this International Standard.

13.2 Duly qualified personnel means that such personnel:

- have the knowledge of the principles of NDT and the specific knowledge in relation to the sector;
- have industrial experience of the application of the NDT method;
- have the ability to conduct qualification examinations;

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➤ be able to interpret the questionnaire and results of qualification examinations.

13.3 Within two years of the date of appointment, these examiners shall have gained certification by satisfying the requirements for recertification as described in 11.3.1.

14. Transition between EN 473:2008, ISO 9712:2005 and this International Standard

This clause does not apply to Meena International as the Certification from the beginning will be in compliance with ISO 9712:2012.

Additional Information:

15. Complaints and Appeals

Meena International has a structured complaints and appeals procedure and the same may be downloaded from Meena's website or from HQ in the following address.

Meena International,
 Training & Certification Division,
 Plot No.-7, First Cross Street, VGN Royal Enclave,
 Paruthipattu, Chennai – 600071, India.

IPC certificate holders must recognise that personal integrity and professional competence are

16. Change of Employer

- Change of employment shall not require a recertification.
- IPC Certificates signed by the employer for work authorisation shall be returned to Meena International for re-issue upon change of employer. This service is done free of cost and the change request shall be supported by an offer of employment copy from the new employer and this is subject to verification by Meena.

17. Other Certifying Bodies Recognised by Meena:

Meena will prepare and update from time to time a list of Certifying Bodies (CBs) recognised by Meena and holders of valid certificates from such CBs will be granted exemption some or all examination parts based on the merit of the certification held. This will be assessed by the Certification Manager on case by case and exemption granted as applicable.

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