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CHAPTER 1 GENERAL

1.1 Purpose

1.1.1 As the correctness and effectiveness of any application of non-destructive testing (NDT) depends upon the capabilities of the personnel who perform or are responsible for the test, Rules for Qualification and Certification of NDT Personnel (hereinafter referred to as "the Rules") is specially developed by reference to the principles of ISO 9712-2012, for the purpose of ensuring the repair and construction quality of ships, offshore installations and other metal structures of which the safe operation and usage are guaranteed.

1.1.2 Qualification and certification to the Rules provides an attestation of general competence of NDT operator only, and does not represent an authorization to operate. The NDT personnel as certified in accordance with the Rules may be given an authorization to operate and conduct the testing operation provided that they satisfy the specific quality procedure as additionally required by the employer. Where required by regulatory requirements and codes, the authorization to operate will be given in writing by the employer in accordance with a quality procedure that defines any employer-required job-specific training and examinations designed to verify the certificate holder's knowledge of relevant industrial codes, standards, NDT procedures, equipment, and acceptance criteria for the tested products.

1.2 Application

1.2.1 The Rules applies to the qualification and certification of personnel who perform and are responsible for NDT methods used for ships, offshore installations and other metal structures, such as radiographic, ultrasonic, magnetic particle, liquid penetrant, edd current testing and visual inspection which are administered by CCS Certification Committee for NDT Personnel (hereinafter referred to as "the Certification Committee").

1.2.2 For qualification and certification of other NDT methods which are not covered in the Rules, reference may be made to the recognized standards acceptable to the Rules or the Certification Committee.

1.2.3 The Rules is also applicable to the qualification and certification of technical levels for personnel who are engaged in safety supervision, inspection, technique management, education, research and other work.

1.3 Definitions

1.3.1 For the purpose of the Rules:

(1) Qualification: demonstration (examination and assessment) of physical attributes, knowledge, skill, training and experience required to properly perform NDT tasks.

(2) Certification: a procedure, used by the Certification Committee to confirm that the qualification requirements for a method, level, etc. have been fulfilled, leading to the issuing of a certificate.

(3) Certificate: a document issued by the Certification Committee under the provisions of the Rules, indicating that the named person has demonstrated the competence(s) defined on the certificate.

(4) Authorization to operate: a written statement issued by the employer or work unit, based upon the scope of certification, authorizing the individual to carry out defined tasks.

(5) Certification body: a body that administers procedures for qualification and certification for NDT personnel according to the requirements of the Rules.

(6) Examination center: a center approved by the Certification Committee where trainings are organized and qualification examinations are assisted to carry out.

(7) Employer or work unit: a legal entity for which the candidate works on a regular basis.

(8) Candidate: an individual applying for qualification and certification who gains experience under the supervision of suitably qualified personnel.

(9) Examiner: a person certified to Level III in the method, or an NDT expert designated by the Certification Committee, for which he is authorized to conduct the qualification examination and score.

(10) Invigilator: a person authorized by the Certification Committee to supervise examinations.

(11) NDT training: a process of instruction in theory and practice in the NDT method for which certification is applied, which takes the form of training courses to a syllabus approved by the Certification Committee.

(12) Job-specific training: an operating instruction, provided by the employer or work unit to the certificate holder in those aspects of NDT specific to the employer's products, NDT equipment, NDT procedures and applicable codes, standards, specifications and procedures.

(13) Industrial experience: a period during which the experience of the candidate gained under qualified instruction, in the application of the specific NDT method as main work, including the testing experience of application of the NDT method in materials, parts or scantlings, but excluding the time used for operation in training courses.

(14) Qualification examination: an examination, administered by the Certification Committee, which assesses the general, specific and practical knowledge and the skill of the candidate to achieve a specific NDT level.

(15) General examination: one of written examinations at Levels I and II, concerned with the basic principles of an NDT method.

(16) Specific examination: one of written examinations at Levels I and II, concerned with specific knowledge and skill needed in the application of an NDT method in the ship industry and offshore installations.

(17) Basic examination: one of written examinations at Level III, which demonstrates the candidate's knowledge of the materials science and processing technology and welding technology, the qualification and certification system according to the Rules, and the basic principles of NDT methods as required for Level II.

(18) Main-method examination: one of written examinations at Level III, which demonstrates the candidate's general and specific knowledge, and the ability to prepare NDT procedures as applied in the ship industry and offshore installations.

(19) Practical examination: an assessment of practical skills, in which the candidate demonstrates familiarity with, and the ability to perform, the test.

(20) Test specimen: a sample used in practical examination, preferably representative of products typically tested in the applicable sector, which includes more than one defect (possibly including radiographs and data sets). It may either be a product or a special sample.

(21) NDT method: discipline applying a physical principle in non-destructive testing.

(22) NDT technique: specific way of utilizing an NDT method.

(23) NDT operating instructions (technology card): an operating document describing an NDT method to be applied when testing a specific object.

(24) NDT procedure: a technical guidance describing an NDT method to be applied when non-destructively testing products.

(25) Significant interruption: absence or change of activity while the certificate holder, within the valid period of his certificate, practicing the duties corresponding to the level in the method and the level within the certified scope, for either a continuous period in excess of one year or more periods for a total time exceeding two years.

1.4 Abbreviations

1.4.1 The abbreviations adopted in the Rules are as follows:

(1) CCS: China Classification Society.

(2) ISO: International Standardization Organization.

(3) NDT: Non-destructive Testing.

(4) RT: Radiographic Testing.

(5) UT: Ultrasonic Testing.

(6) MT: Magnetic Particle Testing.

(7) PT: Liquid Penetrant Testing.

(8) ET: Edd Current Testing.

(9) VT: Visual Testing.

(10) UWVT: Underwater Visual Testing.

(11) UWMT: Underwater Magnetic Particle Testing.

(12) UMUT: Underwater Ultrasonic Testing.

(13) TKY-UT: Ultrasonic Testing for T-, K- and Y-shaped Tube Connection.

(14) PAUT: Phase Array Ultrasonic Testing.

(15) TOFD: Time of Flight Diffraction.

CHAPTER 2 CERTIFICATION BODY AND RESPONSIBILITY

2.1 General requirements

2.1.1 The Certification Committee is responsible for CCS qualification and certification of NDT personnel.

2.2 Certification committee

2.2.1 The Certification Committee is composed of representatives of NDT experts and management personnel from survey units, universities and colleges, research and design institutes related to ships, offshore engineering and other metal structure manufacturing and repairing industries.

2.2.2 The Certification Committee is entitled to:

(1) be responsible for the management of qualification and certification of NDT personnel in accordance with the provisions of the Rules;

(2) be responsible for developing and revising the examination syllabus, specifications of test specimen and for approving the training syllabus and the specimen;

(3) establish and maintain the question bank and specimen range, and to organize and supervise the qualification examination;

(4) establish or approve the examination center, and to monitor and inspect it on the regular basis;

(5) be responsible for and supervise the security of all examination materials (question bank, specimen range, standard answers and examination papers, etc.), to ensure that specimens are not in use for training purposes;

(6) be responsible for issuing all certificates and keeping relevant files.

2.3 Examination center

2.3.1 The examination center is to be approved by and work under the supervision of the Certification Committee, and be responsible for the preliminary qualification review and training of personnel within the scope of authorization by the Certification Committee.

2.3.2 The examination center is to have adequate qualified staff, necessary premises, appropriate equipment and apparatus (including specimens used for practical examinations applicable to different methods, testing difficulties and levels concerned).

2.3.3 To apply a documented quality management system approved by the Certification Committee.

2.3.4 To prepare and assist to conduct examinations under the responsibility of a leader of the examination group authorized by the Certification Committee. To use only those documents and examination questionnaires established or approved by the Certification Committee and to use only specimens prepared or approved by the Certification Committee for the practical examinations conducted at the center.

2.3.5 The examination center is to be subject to the inspection by the Certification Committee, and provides assistance in the examination and supervision for the personnel designated or authorized by the Certification Committee.

2.3.6 To maintain valid records as required by the Certification Committee.

2.4 Employer or work unit

2.4.1 The employer or work unit is entitled to:

(1) confirm the validity of the Application for Qualification (Appendix A) provided by the recommended candidate to the Certification Committee;

(2) be responsible for all that concerns the specific object to test, including any job-specific training for NDT personnel under his control, as the case may be;

(3) authorize the certified personnel employed by him to operate and to be fully responsible for the validity of NDT operations and their results;

(4) ensure that the annual visual acuity and health requirements of 4.4 of the Rules are met by his certificate holder;

(5) issue or verify continuity in the application of the NDT method for renewal or recertification without significant interruption and accident; and

(6) provide the industrial experience demonstration.

2.4.2 If a candidate is recommended by his employer or is a self-employed individual, he is to assume all responsibilities ascribed to the employer.

2.4.3 Neither the employer nor work unit (including his staff) is to be directly involved in the qualification examination.

2.4.4 The employer or work unit is not to intervene in the certification.

CHAPTER 3 LEVELS OF QUALIFICATION AND TECHNICAL REQUIREMENTS

3.1 General requirements

3.1.1 Personnel engaged in NDT operation are divided into 11 categories as: radiographic testing (RT), ultrasonic testing (UT), magnetic particle testing (MT), liquid penetrant testing (PT), edd current testing (ET), visual testing (VT), underwater visual testing (UWVT), underwater magnetic particle testing (UWMT), underwater ultrasonic testing (UWUT), phase array ultrasonic testing (PAUT) and time of flight diffraction (TOFD).

3.1.2 NDT personnel certified by each testing method are classified in accordance with their ability as Level I (primary), Level II (intermediate) and Level III (advanced). Persons who have not been certified are considered as trainees, who are not to perform the testing independently.

3.1.3 Certified NDT personnel are to perform the testing related to the certification category within the scope of the authorization of the employer.

3.2 Responsibilities of Level I personnel

3.2.1 An individual certified to Level I may carry out the following tasks according to the NDT process card/ NDT procedures and under the supervision of Level II or Level III personnel, after being authorized by the employer, within the scope of the competence defined on the certificate:

(1) to adjust and operate NDT equipment;

(2) to perform NDT tests;

(3) to record test data; and

(4) to report test results, with no evaluation.

3.3 Responsibilities of Level II personnel

3.3.1 An individual certified to Level II may carry out the following tasks, after being authorized by the employer, within the scope of the competence defined on the certificate:

(1) to select NDT technique for the testing method to be used;

(2) to define limitations of application of the testing method;

(3) to prepare NDT instructions, including codes, standards, specifications and procedures, according to the actual working conditions;

(4) to adjust and calibrate equipment settings;

(5) to perform NDT tests;

(6) to interpret and evaluate test results according to applicable NDT codes, standards, specifications or procedures;

(7) to carry out and supervise all tasks and provide guidance for personnel at or below Level II;

(8) to issue or review the NDT report.

3.4 Responsibilities of Level III personnel

3.4.1 An individual certified to Level III may carry out the following tasks, after being authorized by the employer, within the scope of competence defined on the certificate:

(1) to assume the responsibility for a test facility or staff;

(2) to develop or review and verify the NDT procedures and instructions;

(3) to interpret NDT codes, standards, specifications and procedures;

(4) to determine the particular NDT methods, procedures and instructions to be used;

(5) to carry out and supervise all tasks at all levels;

(6) to provide guidance for personnel at all levels.

3.4.2 Level III personnel are to have demonstrated:

(1) competence to evaluate and interpret results in terms of existing codes, standards, specifications and procedures;

(2) sufficient practical knowledge of applicable raw materials, products, fabrication and processing technology to select NDT methods, determine NDT techniques, and assist in establishing acceptance criteria where none are otherwise available;

(3) a general familiarity with the principles related to NDT methods.

CHAPTER 4 ELIGIBILITY

4.1 General requirements

4.1.1 The candidate for qualification certification of NDT personnel is to have a physical fitness and education for the working conditions, trained as required and with a certain practical industrial experience, and holding a lower level certificate (except for the candidate for Level I certification).

Notes: ① Candidates graduated from colleges of science and engineering (as B.E./B.S.) or with NDT technical college degree and higher, may provide direct application for Level II certification.

② Candidates with experience in other sectors of an NDT method holding a valid certification recognized by the State, may provide application for the same level and same testing method of qualification examination subject to confirmation by the Certification Committee.

4.2 Training experience

4.2.1 A candidate for Level I, Level II or Level III certification as first time may attend the group training approved by the Certification Committee. Those candidates not attend the group training are to meet the requirements of 4.2.3.

4.2.2 Such training is to be conducted in accordance with the training syllabus approved by the Certification Committee.

4.2.3 All candidates are to provide documentary evidence, in a form acceptable to the Certification Committee, that training in the method for which the certification is applied has been satisfactorily completed. The minimum duration of training undertaken by Level I and Level II personnel is given in Table 4.2.1.

Minimum training requirements for total hours (h) **Table 4.2.1**

NDT method	RT	UT	MT	PT	ET	VT	UWVT	UMMT	UWUT	KTY-UT	TOFD	PAU
Level I	60	60	40	40	40	24	24+20	30+20	40+24	−	40	80
Level II	120	120	80	80	80	48	48+30	80+30	120+40	80+80	80	104
Level III	80	80	60	60	60	−	−	60+35	80+50	−	120	126

Note: ① Training hours include both theory and practical courses.
② The practical operation time of candidates for Level I and Level II certification is not to be less than 40 % of the total training hours.
③ The training hours for underwater NDT method or TKY-UT method are that for related land-based method plus the specific training hours for underwater or TKY-UT method.

4.2.4 For candidates for Level III certification, their training prior to qualification certification may be done in different ways according to the actual conditions: by attending training courses, seminars, discussions for studying professional books, periodicals and other specialized printed or electronic materials organized by the Certification Committee. Regardless of the manner of training, the Level III candidate is to submit documentary evidence of appropriate training in a form acceptable to the Certification Committee.

4.3 Education and industrial experience

4.3.1 Candidates for NDT qualification are to have a certain degree of education. Candidates for Level I and Level II certification are to have an education of high school and higher (or equivalent education) while for Level III certification are to have an education of college and higher (or equivalent education).

4.3.2 The minimum duration of experience of candidates for Level I and Level II certification is to be in compliance with the requirements of Table 4.3.2.

Requirements for industrial experience of candidates for Level I and Level II certification (in months) **Table 4.3.2**

Testing method	RT,UT,ET		TOFD		PAUT		MT,PT,VT		UWVT,UWMT		UWUT	
Level	I	II	I	II	I	II	I	II	I	II	I	II
Industrial experience	3	12 (inclusive of Level I)	3	4 (inclusive of Level I)	3	6 (inclusive of Level I)	1	4 (inclusive of Level I)	12	36 (inclusive of Level I)	24	60 (inclusive of Level I)

Notes: ① The industrial experience duration in the Table is the cumulative total of the actual working hours, which may be converted based on 40 h/week or 175 h/month.

② The industrial experience duration required for the candidate for Level I certification is the working experience duration under the instruction of Level II personnel or that related to NDT. For Level II certification, the industrial experience is work performed as Level I.

③ Candidates for TKY-UT, TOFD and PAUT certifications are to acquire UT certificate at related level firstly and work with a UT certificate for more than 18 months.

④ Credit for industrial experience may be gained simultaneously in two or more of the NDT methods covered by the Rules, with the reduction of total required experience as follows:

a. two testing methods, reduction of total required time by 25 %;

b. three testing methods, reduction of total required time by 33 %;

c. four or more testing methods, reduction of total time by 50 %.

In all cases, the candidate is to be required to show that, for each of the testing methods which he applies for certification, he has at least 50 % of the time required in the Table, and the experience required is never to be less than one month in duration.

4.3.3 The minimum duration of industrial experience related to the formal education of candidate for Level III certification is to be in compliance with the requirements of Table 4.3.3.

Minimum duration of industrial experience related to the formal education of candidates for Level III certification (in months) **Table 4.3.3**

Education	B.E./B.S. and higher	Technical college
Industrial experience (land-based)	36	48
Industrial experience (underwater)	24	48

Note: ① For Level III certification, the industrial experience is work performed as Level II.

② A reduction of up to 25 % in the industrial experience as required may be accepted for candidates who are college or junior college graduates majoring in NDT.

4.3.4 Candidates for Level III certification are to hold a valid Level II certificate issued by CCS of the testing method he applied for.

4.3.5 Industrial experience is to be acquired prior to the qualification examination. Documentary evidence of experience is to be confirmed by the employer and submitted to the Certification Committee.

4.4 Health and vision requirements

4.4.1 Candidates are to be healthy, and fit for the work in which he is engaged.

4.4.2 Far-vision acuity is not to be less than 4.9 (0.8) of the eye chart, with at least one eye, either corrected or uncorrected. Near-vision acuity is to permit reading, a minimum of Times Roman No.5 or equivalent letters (height of letter: 1.6 mm) at not less than 30 cm with one or both eyes, either corrected or uncorrected.

4.4.3 Color vision is to be sufficient that the candidate can distinguish contrast between the colors used in the NDT method concerned.

4.4.4 The candidates for underwater NDT certification are also to have a currently valid certificate for divers.

CHAPTER 5 QUALIFICATION EXAMINATION

5.1 Examination subjects

5.1.1 The examination subject for Levels I and II is given in Table 5.1.1.

Examination subject - Levels I and II **Table 5.1.1**

Level	General examination	Specific examination	Practical examination
I	Basic principles	Relevant standards	Commissioning of apparatus, operation recording
II	Basic principles	Relevant standard, process card	Commissioning of apparatus, operation recording, test report

5.1.2 The examination subject for Level III is given in Table 5.1.2.

Examination subject - Level III **Table 5.1.2**

Level	Basic examination	Main-method examination	Practical examination	Technical presentation
III	Basic principles, relevant general knowledge	Standard for Level III knowledge related to the method applied for, NDT procedure	Commissioning of apparatus, operation recording, test report	Technical summary or essay

5.2 Examination requirements

5.2.1 Level I

(1) Subject and content

The subject includes general examination, specific examination and practical examination.

General examination includes basic knowledge of the method, including physical principles, equipment and materials, testing technique and application, etc.

Specific examination includes the basic knowledge related to the codes, standards, rules and NDT procedures which may be used for implementation of NDT tasks.

Examination for practical operation includes testing of the specimen in accordance with the specified NDT process card.

(2) Form and basic requirements

Form and basic requirements **Table 5.2.1(2)**

Subject	Form	Question type	Number of questions	Remark
General examination	Written examination, close-book	Multiple-choice, calculation, Q & A	≥ 40	Selected from question bank
Specific examination	Written examination, open-book	Multiple-choice, true or false, calculation, Q & A	≥ 30	
Practical examination	Operation	Practical specimen	1 or 2	Selected from specimen range

5.2.2 Level II

(1) Subject and content

The subject includes general examination, specific examination and practical examination.

General examination includes basic knowledge of the method, including physical principles, equipment and materials, testing technique and application, etc.

Specific examination includes the Rules and preliminary understanding and application of the codes, standards, rules and the NDT procedures which may be used for implementation of NDT tasks, of which the procedure includes the development of a process card for a general specimen in accordance with the relevant standards.

Examination for practical operation includes independent testing of the specimen.

(2) Form and basic requirements

Form and basic requirements **Table 5.2.2(2)**

Subject	Form	Type of question	Number of questions	Remark
General examination	Written examination, close-book	Multiple-choice, true or false, Q & A, calculation	≥ 40	Selected from question bank
Specific examination				
(1) Relevant standards	Written examination, open-book	Multiple-choice, true or false, Q & A	≥ 30	
(2) Procedures	Written examination, open-book	Process card, Q & A	≥ 4	
Practical examination	Operation	Practical specimen	1 or 2	Selected from specimen range

5.2.3 Level III

(1) Subject and content

The subject includes basic examination, main-method examination, practical examination and technical presentation.

Basic examination includes general knowledge of materials science, technology, defect and four methods as required for Level II (including at least the knowledge of the method applied for and one volumetric method (RT or UT)), as well as the personnel qualification and certification system related to the Rules.

Main-method examination includes Level III knowledge of the method applied for, standards and procedures, of which:

Standards examination includes the Rules and the comprehensive understanding and application of the codes, standards, rules and the NDT procedures which may be used while implementing NDT tasks.

Procedure examination includes NDT procedures for drafting the method which is applied for.

Practical examination includes independent testing of the specimen (radiographic testing is to include radiographs interpretation).

Technical presentation includes comprehensive application ability for the candidate, including basic principles and knowledge, experience accumulated, etc.

(2) Form and basic requirements

Form and basic requirements **Table 5.2.3(2)**

Subject	Form	Question type	Number of questions	Remark
Basic examination				Reference to question bank
(1) Knowledge of material science, technology and defect	Written examination, close-book	Multiple-choice	≥ 25	
(2) Qualification and certification system	Written examination, close-book	Multiple-choice	≥ 10	
(3) Knowledge of four methods as required for Level II	Written examination, close-book	Multiple-choice	15 for each testing method (total 60)	
Main-method examination				
(1) Level III knowledge	Written examination, close-book	Multiple-choice, true or false, Q & A, calculation	≥ 30	
(2) Relevant standards	Written examination, open-book	Multiple-choice, true or false, Q & A, calculation	≥ 20	
(3) Procedures	Written examination, open-book	Process card, Q & A	≥ 4	
Practical examination	Operation	Practical specimen	1 or 2	Selected from specimen range
Technical presentation	Essay or technical summary, oral examination	Q & A	≥ 4	

(3) The basic examination is to be passed first and remains valid, and the results of the examination are to remain valid for up to five years.

5.3 Conduct of examinations

5.3.1 The examination is to be conducted in the examination center. Where the examination is conducted at employer's location, the Certification Committee is to ensure the impartiality of the examination by enhanced monitoring. The examination is to be invigilated by the representative placed under the authorization of the Certification Committee.

5.3.2 Prior to commencement of the examination, the candidate is to present to the examiner or invigilator valid proof of identification.

5.3.3 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 is to be excluded from further examinations for a period of one year.

5.3.4 The examination is to be implemented by an examination group, conducted by the leader of the group and invigilated by at least two examiners. Where necessary, person(s) will be assigned by the Certification Committee to supervise and monitor.

5.3.5 The examination group is to be selected and designated by the Certification Committee. The leader of the group and examiner(s) are not to be permitted to examine any candidate that they have trained for the examination, or who has the same employer or work unit as the candidate.

5.3.6 At least one of the examiners for Level I and Level II examination is to hold CCS certificate of Level III on the related method or to be the expert designated by the Certification Committee.

5.3.7 At least two of the examiners for Level III examination are to hold CCS certificate of Level III on the related method or to be the experts designated by the Certification Committee.

5.3.8 A candidate for a practical examination may use his own NDT apparatus.

5.3.9 The examiner is to check the reliability of the apparatus. Any apparatus or components found unreliable or could not be used during the examination is to be replaced.

5.4 Examination grading

5.4.1 Examiners are to be responsible for grading the examination. The grading is to be done separately by each examiner, then the results are to be collected at the presence of all examiners and the final results of the examination are to be confirmed by the leader of the examination group.

5.4.2 Eligibility requirements

Eligibility requirements for Level I and Level II examinations Table 5.4.2(1)

Level / Subject	I	II
General examination	≥ 70	≥ 70
Specific examination		
(1) Relevant standards	≥ 70	≥ 70
(2) Procedures	≥ 70	≥ 70
Practical examination	≥ 80	≥ 80

Eligibility requirements for Level III examination Table 5.4.2(2)

Level / Subject	III
Basic examination	≥ 70
Main-method examination	
(1) Knowledge of Level III	≥ 70
(2) Relevant standards	≥ 70
(3) Procedures	≥ 70
Practical examination	≥ 80
Technical presentation	≥ 3.5

5.5 Re-examination

5.5.1 A candidate who fails to obtain the pass grade as required by Table 5.4.2(1) may apply for re-examination in the failed subject(s), provided that the re-examination takes place not sooner than one month, and nor later than one year after the original examination.

5.5.2 A candidate who fails to obtain the pass grade as required by Table 5.4.2(2) may apply for re-examination twice in the failed subject(s), provided that the re-examination takes place not sooner than one month, and nor later than five years after the original examination.

5.5.3 A candidate failing all permitted re-examination is to apply for and — if accepted — to take the examination in accordance with the procedure established for new candidates.

5.6 Reapplication for examination

5.6.1 Any excluded candidate who, during the course of the examination, does not abide by the examination rules may not apply for a further examination until for a period of at least 12 months.

CHAPTER 6 CERTIFICATION

6.1 Administration

A candidate fulfilling all conditions for certification is to be issued with a certificate, corresponding wallet card and experience manual by the Certification Committee.

6.2 Certificates

The certificates are uniformly made by the Certification Committee and are to include:

a) full name, gender and identification number;

b) work unit;

c) NDT method(s);

d) level of certification;

e) date upon which certification is issued;

f) date upon which certification expires;

g) certificate number;

h) photograph;

i) name of the certification body;

j) stamp of the certification body (to be affixed on the photograph).

6.3 Validity

6.3.1 The period of validity of certificates for NDT personnel of all levels is not to exceed five years from the date of certification indicated on the certificates, and the period of validity of certificates for underwater NDT personnel of all levels is not to exceed three years from the date of certification indicated on the certificates.

6.3.2 Certification is to be withdrawn by the Certification Committee in either of the following cases:

(1) at the option of the Certification Committee after reviewing evidence of unethical behavior;

(2) if the work engaged in is beyond the category of the certificate or the level specified;

(3) if a significant accident takes place due to the individual's negligence and the individual not fit for NDT work;

(4) if a significant interruption takes place in the individual's work;

(5) if any evidence to demonstrate that the individual fails to meet the visual acuity and health requirements for NDT work; or

(6) if the certificate expires and the individual fails to pass renewal or recertification, until when the individual meets the requirements for renewal or recertification.

6.4 Renewal

6.4.1 Prior to completion of the first period of validity, certification may be renewed by the Certification Committee for a new period of similar duration, provided that the certificate holder provides six months before the certificate expires with the documentary evidence of:

(1) satisfactorily fulfilling, during the preceding 12 months, the vision and health requirements;

(2) no accident or significant technical failure within the validity; and

(3) continued satisfactory work activity, relevant to the certification, without significant interruption.

6.4.2 The individual applying for renewal certification is to be trained on renewal held by the examination center.

6.4.3 Practical examination is to be passed for the renewal of Levels I and II certification. The standards, procedures in the main-method examination and technical presentation are to be passed for the renewal of Level III certification.

6.4.4 A candidate who fails to obtain the pass grade required for renewal may be re-examined in the failed part(s), provided that the re-examination takes place not sooner than one month but not later than 12 months after the original examination. A candidate failing the re-examination is to take the examination in accordance with 5.2 of the Rules.

6.5 Recertification

6.5.1 Prior to completion of the second period of validity, the certified individual may be recertified by the Certification Committee for a similar duration, provided that the individual meets 6.4.1(1), 6.4.1(2) and 6.4.1(3) for renewal and the following conditions, as applicable.

6.5.2 The individual applying for recertification is to be trained by the examination center.

6.5.3 Recertification examination

The Levels I and II personnel for recertification are to successfully complete necessary examinations. Practical examination is to be passed for Level I. Specific and practical examinations are to be passed for Level II. Relevant standards, procedures examination, practical examination and technical presentation are to be passed for Level III.

6.5.4 A candidate who fails to obtain the pass grade required for recertification may be re-examined in the failed part(s), provided that the re-examination takes place not sooner than one month but not later than 12 months after the original examination. A candidate failing the re-examination is to take the examination in accordance with 5.2 of the Rules.

6.6 Level III credit system certification

6.6.1 In addition to 6.4.3 and 6.5.3, the Level III individual may decide credit system for renewal or recertification. If the credit system certification is chosen, employer’s documents or evidences are required to be provided, and a written statement of approval from the employer is to be provided to the Certification Committee.

6.6.2 Certification is to be approved, where the credit system is chosen, in accordance with Appendix B. An individual who does not meet the requirements of the credit system is to take the examination in accordance with 6.4.3 and 6.5.3 of the Rules.

6.6.3 In the event of failure at the attempt at certification by examination, application for recertification via the structured-credit system is generally not to be considered.

6.7 Files

6.7.1 The Certification Committee for NDT Personnel or the examination center is to be responsible for maintaining:

(1) updated list of all certified individuals classified according to NDT method and level;

(2) summary report for each qualification examination; and

(3) separate file(s) for each certified individual:

① application forms;

② examination documents such as questionnaires and answers, description of specimens, records, results of test, NDT procedures and grade sheets;

③ reasons for any withdrawal of certification and details of the punishment; and

④ all documents, information and correspondence relating to qualification certification of NDT personnel and other documents considered necessary to keep.

6.7.2 Files related to certified individuals are to be kept as long as the certificate remains valid and for at least one full certification cycle after a lapse of certification. Other files are to be in compliance with the relevant provisions of CCS file management.

Appendix A
(Normative)

Application for Qualification of NDT Personnel **(Front page)**

China Classification Society
Application for Qualification of NDT Personnel

<table>
<tr><td colspan="3">Name:</td><td colspan="3">Gender: □Male □Female</td><td colspan="2" rowspan="7">Photo</td></tr>
<tr><td colspan="3">Date of Birth:</td><td colspan="3">Identification No:</td></tr>
<tr><td colspan="3">Post:</td><td colspan="3">Professional title:</td></tr>
<tr><td colspan="6">Employer:</td></tr>
<tr><td colspan="6">Address:</td></tr>
<tr><td colspan="3">Post code:</td><td colspan="3">Fax:</td></tr>
<tr><td colspan="3">Tel:</td><td colspan="3">E-mail:</td></tr>
<tr><td>Highest education</td><td>From to</td><td colspan="3">Graduated from</td><td colspan="2">Major</td></tr>
<tr><td></td><td></td><td colspan="3"></td><td colspan="2"></td></tr>
<tr><td rowspan="4">Situation of NDT certificate</td><td>Testing method</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Highest level</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Date of issue</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Certification body</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td rowspan="3">Application for certification</td><td>Testing method</td><td colspan="2"></td><td colspan="3"></td></tr>
<tr><td>Level</td><td colspan="2"></td><td colspan="3"></td></tr>
<tr><td>Category</td><td colspan="2"></td><td colspan="3"></td></tr>
<tr><td>Original certificate No.</td><td colspan="3"></td><td>Validity until</td><td colspan="2"></td></tr>
<tr><td>Experience manual No.</td><td colspan="3"></td><td>Date of issue</td><td colspan="2"></td></tr>
<tr><td colspan="7">Working within the validity:
(1) unethical behavior □yes □no
(2) accident and technical failure □yes □no
(3) significant interruption □yes □no
(4) change of work or employer □yes □no
If yes, explain the change:</td></tr>
<tr><td rowspan="3">Health</td><td>Health</td><td colspan="5"></td></tr>
<tr><td>Visual acuity</td><td colspan="5"></td></tr>
<tr><td>Color vision</td><td colspan="5"></td></tr>
<tr><td colspan="7">Training records:</td></tr>
</table>

Application for Qualification of NDT Personnel (Back page)

<table>
<tr><td colspan="3">Working experiences of the NDT method applied</td></tr>
<tr><td>From to</td><td>Employer</td><td>NDT method</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td colspan="3">Training demand: yes□ no□</td></tr>
<tr><td colspan="3">Employer’s recommendation:
The candidate has been formally employed. The information above is true and the application is approved.

Signature/seal:

Date:</td></tr>
<tr><td colspan="2">Comments of Examination Center

Signature/seal:

Date:</td><td>Comments of the Certification Committee for NDT Personnel:

Signature/seal:

Date:</td></tr>
</table>

Note: Type of Application:

(1) new candidate

(2) renewal

(3) recertification

Appendix B
(Normative)

Structured Credit System for Level III Renewal / Recertification

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

Item	Activity	Points accorded for each item	Maximum points per year per item	Maximum points per five-year period per item
1	Membership of an NDT society, attendance at seminars, symposia, conferences and/or courses covering NDT and related sciences and technologies	1	3	8
2.1	Attendance at international and national standardization committees	1	3	8
2.2	Convenorship of standardization committee	1	3	8
3.1	Attendance at sessions of other NDT committees	1	3	8
3.2	Convenorship of sessions of other NDT committees	1	3	8
4.1	Attendance at sessions of NDT related working groups	1	5	15
4.2	Convenorship of NDT related working groups	1	5	15
5.1	NDT related technical/scientific contributions or publications	3	6	20
5.2	NDT related research work published	3	6	15
5.3	NDT research activity	3	6	15
6	NDT technical instructor (per 2 h) and/or NDT examiner (per examination)	1	10	30
7	Professional activity	—	—	—
7.1	Responsibility within an NDT facility, (such as NDT training center/examination center/testing department, etc.) (for each full year)	10	10	40
7.2	Dealing with disputes referring to clients	1	5	15
7.3	Professional development for an examination component	1	5	15

To be eligible for renewal or recertification, a minimum of 70 points are to be accrued during the five-year validity of the certificate, while a maximum of 25 points per year are to be accepted, of which:

1. the highest points of item 1 ~ item 4: 20 points;
2. the highest points of item 5 ~ item 6: 30 points;
3. the highest points of item 7: 50 points.

In addition to the above points, the candidate is to submit evidence of satisfying the criteria as follows:

1. agenda and list of attendees for the meetings under item 1 ~ item 4;
2. a brief description of NDT related technical/scientific contributions or publications and the list of authors under item 5, if there is more than one author, the first author is to define points for the others;
3. a summary of training and/or examiners under item 6; and
4. for each certificate, evidence of work activity per year under item 7.