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Industry Sector Qualification Oil & Gas Program

ASNT Document QP-ISQ-2 Revision 0

Approved:



The American Society for Nondestructive Testing, Inc.

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(ASNT)

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FOREWORD

This document establishes the requirements for the ASNT Industry Sector Qualification (ISQ) program for the Oil & Gas Industry (ISQ – O&G) which provides for an enhanced evaluation of competency by examiners in hands-on practical demonstration of various NDT techniques. This program has been developed to improve NDT reliability through a rigorous performance demonstration qualification process by an accredited certification body. This program will provide prospective users of NDT personnel (employers) with NDT personnel who have successfully participated in the ISQ program whereas this can be an extension of an employer's SNT-TC-1A program.

The ISQ program outlined in this document may apply when any of the designations below are required through Oil & Gas Industry asset owner/operators;

- a) An owner / operator specification
- b) Contractual requirements
- c) A recognized & referenced industry standard; e.g. API, NACE, etc.
- d) Fitness for Service critical examinations
- e) In response to concerns around NDE technician Performance

ASNT has established these practical examinations based on psychometric principles to assure fair, valid and reliable examinations that establish a minimum competency level while “raising the bar” in NDT qualification. ASNT uses actual industry and owner/user representation in the development of the examinations to assure applicability and acceptance by the industry stakeholders worldwide.

Individuals that pass the performance demonstration examinations covered by this program will have demonstrated practical competency required to perform such work in the Oil & Gas industry sector. Guidance for the expected prerequisite level of knowledge and experience to sit these ISQ examinations can be found in the following guidelines:

ASNT Recommended Practice No. SNT-TC-1A, *Personnel Qualification and Certification in Nondestructive Testing*

ANSI/ASNT Standard CP-189, *ASNT Standard for Qualification and Certification of Nondestructive Testing Personnel*

NOTE: Where gender specific words such as "his", "her", "he" or "she" appear in this document the other gender is also applicable.

Inquiries related to this document should be directed to the following address:

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1.0 Scope

This document establishes the system for application of Industry Sector Qualification examinations administered and maintained by the American Society for Nondestructive Testing (ASNT).

The purpose of the Industry Sector Qualification (ISQ) Program is to provide the Oil & Gas industry with NDT personnel who have demonstrated competency in practical application of a specific technique through hands on performance demonstration qualification examinations. The administration of written examinations is currently not intended to be part of this document & program.

The nondestructive testing techniques covered, but not limited to, in this program are:

- a) UT Thickness examination for Corrosion & Laminations in steel
- b) UT Shearwave Flaw Detection & Characterization for welds in steel
- c) UT Phased Array Flaw Detection & Characterization for welds in steel
- d) UT Time of Flight (TOFD) Flaw Detection & Characterization for welds in steel

Other NDT test methods and/or techniques, can and, will be added to this program as industry needs are identified and/or examination sponsorship is provided.

2.0 Definitions

- 2.1 **Authorized examination center (AEC):** An organization with facilities and personnel, independent of the employer that has been authorized and approved by the ASNT Certification Management Council (CMC) to administer NDT qualification examinations.
- 2.2 **Authorized Examination Proctor (AEP):** An individual that has been authorized and approved by the ASNT Certification Management Council (CMC) to administer NDT qualification examinations.
- 2.3 **Candidate:** An individual seeking qualification in accordance with this document.
- 2.4 **Certification Management Council (CMC):** The ASNT council that has the overall responsibility for developing and maintaining the technical content of all ASNT certification programs and shall have the sole responsibility for the determination of certification outcomes in those programs.
- 2.5 **Employer:** The corporate, private, or public entity that directly employs NDT personnel for wages, salary, fees or other considerations.
- 2.6 **Employer authorization:** The process whereby an employer's NDT Level III reviews the knowledge and experience of the employer's NDT personnel and determines if further training or examination is required and then, on behalf of the employer, authorizes

- personnel to perform NDT for that employer.
- 2.7 **Industrial Sector (IS):** A specific area in industry or technology where specialized NDT practices are utilized requiring specific skill, knowledge, equipment or training to achieve satisfactory performance.
 - 2.8 **Industry Sector Qualification (ISQ):** A qualification program where practical demonstration examinations are given to an NDT examiner, for a specific NDT technique applicable to a given industry sector, to assess competency in performing examinations. The ISQ shall be awarded upon successful passing of the examination.
 - 2.9 **International Services Center Certification Group:** The ASNT department responsible for the administration and facilitation of ASNT certification programs in accordance with procedures developed by the ASNT Certification Management Council (CMC).
 - 2.10 **Practical Examination:** An examination designed to assess the candidate's actual application of a specific NDT method or technique by hands-on testing of specimens to detect, identify, and record indications in those samples.
 - 2.11 **Qualification:** As it pertains to the ISQ program, within this document and elsewhere, qualification refers to the verification of competency in a given method and technique through hands on performance demonstration testing. It does not refer to the use of the word qualification as it pertains to NDT certification.
 - 2.12 **Steering Committee:** The group of O&G owner / operator subject-matter experts responsible for the development and maintenance of the ISQ program that fairly and equitably represents the interests of all parties significantly concerned with the ISQ-O&G scheme without any particular interest predominating. The parent committee is the ASNT Certification Management Council (CMC) over the Oil & Gas owner/user steering committee for the ISQ-O&G program.
 - 2.13 **Test specimen:** a sample of a product form containing known discontinuities used in practical examinations.

NOTE: *Test specimens are representative of products typically tested in the Oil & Gas industrial sector and may include more than one area or volume to be tested.*

3.0 Responsibilities

3.1 Certification Management Council (CMC)

The ASNT Certification Management Council is the designated ASNT certification authority made up of NDT subject matter experts that serve as the certification committee for ASNT. Their role shall be as follows:

- 3.1.1 The CMC shall develop and maintain the content of all qualification examinations;
- 3.1.2 The CMC shall develop and have final approval of procedures for the ISQ – O&G including establishment of requirements for the administration of the examinations;
- 3.1.3 The CMC shall determine, define and implement Industrial Sectors (IS's)

within the ISQ program;

- 3.1.4 The CMC shall oversee various Industry Sector owner/user groups and/or steering committees who are used to establish and promote various industry sector examinations, endorsements, or programs; and
- 3.1.5 The CMC shall approve all AEC's and AEP's.

3.2 Oil & Gas Steering Committee

- 3.2.1 The steering committee shall identify areas of need related to techniques to be developed in this program, order of rollout and locations of examination centers.
- 3.2.2 Shall approve all ISQ program procedures.
- 3.2.3 Shall periodically assess the programs validity and competence and provide feedback to the CMC & ASNT.

3.3 Authorized Exam Centers (AECs) & Authorized Exam Proctors (AEP's)

- 3.3.1 AECs, when authorized by the CMC, may be established at various geographical locations to provide greater access to examinations for its members and users.
- 3.3.2 AECs may perform only those examination functions for which they have been authorized by the CMC; e.g. proctoring of examinations.
- 3.3.3 AEP's when authorized by CMC may administer remote ISQ examinations. Requirements shall be defined by the CMC.

3.4 ASNT International Service Center (ISC) Certification Group

- 3.4.1 Shall implement all requirements related to qualification activities as developed or approved by the CMC.
- 3.4.2 Shall provide the final grading of examinations and issuance of qualification documentation.
- 3.4.3 Shall oversee procedures for and operation of, the Industry Sector Qualification examinations in accordance with this document.
- 3.4.4 Shall maintain ultimate responsibility for the qualification credentials that are issued.
- 3.4.5 Shall maintain and assure the safety, security and the confidentiality of the test samples.

4.0 Application Requirements

- 4.1 A completed application for the various examinations shall be submitted to ASNT for approval and scheduling of the examination.
- 4.2 The applicant (either individual or employer) shall be required to provide the following:
 - 4.2.1 Name

- 4.2.2 Address
- 4.2.3 Phone number
- 4.2.4 Unique Email address
- 4.2.5 ASNT Member number (if applicable)
- 4.2.6 Passport Photo (Photo verified at exam location)
- 4.2.7 Payment Method

4.3 For qualification examinations which require a prerequisite, those prerequisites shall be addressed in the individual examination protocol documents.

5.0 ISQ Examination

- 5.1 A hands-on practical examination will be used to assess the candidate's ability to perform the NDT technique on a minimum number of samples and product forms per the applicable ISQ. When designated by the exam, multiple areas of interest may be contained in one test specimen. The specimens and areas of interest contain actual or artificially induced discontinuities representing those discontinuities found in the product type and Industry Sector for which qualification is sought. Candidates must locate, interpret, and evaluate discontinuities and properly document test results.
- 5.2 The exam protocols, exam samples, procedures, grading criteria, and exam sample keys are maintained confidentially with ASNT and approved by review from the CMC Oil & Gas steering committee.
- 5.3 Scope of Qualification: Currently the ISQ is a supplement to a technicians existing NDT certification. The ISQ is NOT an NDT certification on its own. It is still the responsibility of the technician's employer to certify in accordance with their written practice or verify their NDT personnel's certification before sending them on NDT activities and to provide evidence of their personnel's certification to their clients.
- 5.4 Grading: The grading of examinations is performed by ASNT ISC Certification Group staff using grading protocols approved by the CMC. Grading is not performed by AEC or AEP examiners. Grading protocols for each ISQ exam is covered in the exam specific protocol documents.
- 5.5 Re-examination Policy: Candidates who fail the exam shall meet the following conditions to apply and retake the examination additional times.
 - 5.5.1 After a failure on the first attempt, an immediate retake shall be allowed following the same application process as the initial attempt.
 - 5.5.2 After a failure on a second attempt, a thirty (30) day waiting period will be required before an additional application will be processed and an exam can be attempted. The application process shall be the same as the initial application process. It is strongly recommended that the candidate participate in additional training for the exam method in preparation for an additional exam attempt.
 - 5.5.3 After a failure on a third attempt, a ninety (90) day waiting period will be required before an additional application will be processed and an exam can be

attempted. The application process shall be the same as the initial application process. It is strongly recommended that the candidate participate in additional training for the exam method in preparation for an additional exam attempt.

- 5.5.4 After a failure on a fourth attempt and all subsequent attempts, a one hundred eighty (180) day waiting period will be required before an additional application will be processed and an exam can be attempted. The application process shall be the same as the initial application process. It is strongly recommended that the candidate participate in additional training for the exam method in preparation for an additional exam attempt.
- 5.5.5 Any individual found to be in violation of the ASNT examination rules or code of ethics shall be reported to the ASNT ISC certification group in accordance with CMC 15.3.1.2.

6.0 Examination Results and Notification

- 6.1 ASNT ISC shall send examination results in Pass/Fail format to the candidate by electronic mail within ten (10) business days (2-weeks) and shall be posted on the ASNT ISQ online database within twenty (20) business days (4 weeks) from the date of the examination.
- 6.2 Upon completion of all ISQ examinations required for the applicable test method or technique, ASNT ISC will send electronic notification to the candidate to inform them whether they have met the requirements for the ISQ method(s) or technique(s) attempted.
- 6.3 By posting a Pass result on the ASNT ISQ online database, ASNT ISC verifies that the individual has successfully completed a performance demonstration; however, ASNT does not give authority or license to that individual to perform NDT. The employer or other 3rd party shall be responsible to assure competency, certification, and performance of NDT personnel through employer authorization.
- 6.4 Upon successful completion of ISQ examinations ASNT ISC shall add the technician's information to the online database of current ISQ holders. This database shall be on the ASNT website and list all current technicians with an ISQ.

7.0 ISQ Validity

- 7.1 ISQ shall remain valid for a period not to exceed three calendar years. ISQ renewal shall be by examination only.
- 7.2 Qualifications that are not renewed by the expiration date shall be considered expired.
- 7.3 The expiration of prerequisite qualifications does not affect the validity of any other qualifications with ASNT.
- 7.4 New validation periods shall be for three (3) years from the current expiration when a renewal examination is successfully completed within the three (3) months prior to the

current expiration.

- 7.5 Violations to the ISQ Code of Ethics shall be handled per CMC 15.3.1.2.
- 7.6 ISQ shall be revoked if the CMC determines that the qualification holder has violated the applicable code of ethics.
- 7.7 If ISQ is revoked, ASNT ISC will no longer publish the qualification on the website.

8.0 Documentation

- 8.1 ASNT ISC shall maintain an online list of all ISQ individuals including the Industrial Sectors, and NDT methods or techniques for which qualification is held and provide a searchable database on the ASNT website.
- 8.2 All individual ISQ files are considered confidential and are maintained by ASNT ISC in a secure location and for a duration in accordance with approved ASNT procedures.

9.0 Appeals, Complaints and Disputes

- 9.1 Appeals, Complaints and Disputes shall be handled in accordance with CMC 15.3.1.7.
- 9.2 Confidentiality: Information gained in the course of the ISQ process shall not be disclosed to any third party except as required by law.