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ISQ-O&G

Ultrasonic Phased Array Pressure Equipment Weld Examination Protocol

ASNT Certification Services LLC (ASNT CS) Document O&G-UTPA-4 Revision 02

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1. SCOPE

This protocol covers the requirements for the ISQ-O&G qualification for NDT ultrasonic testing phased array (UTPA) angle beam weld quality examination for welds on ASME, or similarly governed, pressure equipment. This ISQ is referred to as the O&G-UTPA. The qualification covers the detection, characterization, and location of manufacturing weld discontinuities found in pressure equipment. This qualification is only applicable to welds in low alloy type carbon steels and type 300 series stainless steels except for type 347. This ISQ does not apply to time of flight diffraction (TOFD) or to UT structural weld inspections.

2. Qualification Applicability

The applicable product forms for the O&G-UTPA include, but are not limited to, plate, piping, pressure vessels, storage tanks, pipelines, etc. The applicable operating environments for the O&G-UTPA include, but are not limited to; refineries, chemical plants, pipelines, shipping terminals, marine transport, floating and fixed platforms, floating production, and storage (FPSO) marine and hull facilities, liquefied natural gas (LNG) facilities, equipment fabrication facilities, plate and pipe mills, etc.

This qualification covers both discontinuity characterization that is used with workmanship-based acceptance criteria and discontinuity sizing that is used with fracture mechanics-based acceptance criteria. Finite crack sizing required for fitness for service analysis of cracking is not covered.

Oil & Gas owner operators may decide qualification applicability appropriate to their company's specific needs.

2.1. The ASNT ISQ UTPA angle beam weld quality examination qualification demonstrates an acceptable level of technician competency to perform phased array angle beam examinations on pressure equipment welds within the following parameters:

- 2.1.1. Low alloy-type carbon steel and some stainless steel types limited by thickness
- 2.1.2. Material thickness from 0.250 to 3 in. (6.35 to 76.2 mm) nominal inclusive for low alloy carbon steels
- 2.1.3. Material thickness from 0.250 to 0.500 in. (6.35 to 12.7 mm) nominal inclusive for type 300 series stainless steels except for type 347 stainless steel, when and where phased array angle beam examination can be utilized.

Note: Thicker type 300 series stainless steel, type 347 stainless steel, and other corrosion-resistance steels that are challenging with shear wave examination or require refracted longitudinal angle beam examination are not covered by this qualification.
- 2.1.4. Curved surfaces from 2 in. diameter up to flat material
- 2.1.5. Single-V and double-V weld configurations
- 2.1.6. Containing the following common weld discontinuity types:

- 2.1.6.1. Cracks

- 2.1.6.2. Lack of fusion at weld sidewall, or weld root
- 2.1.6.3. Incomplete penetration
- 2.1.6.4. Slag inclusions
- 2.1.6.5. Porosity in clusters, or lines

2.2. The qualification shall verify the ultrasonic technician's competency in the following areas:

- 2.2.1. Ability to prepare and deploy adequate scan plans for encoded recorded data collection.
- 2.2.2. Ability to adequately analyze encoded, recorded data.
- 2.2.3. Ability to examine welds with free-hand raster scanning and analyze data in real time.
- 2.2.4. Ability to differentiate weld discontinuities from weld geometry reflectors such as weld reinforcement.
- 2.2.5. Ability to differentiate discontinuity types with highest level of focus on differentiating planar discontinuities from volumetric discontinuities.
- 2.2.6. Ability to accurately measure location of discontinuities along a weld axis.
- 2.2.7. Ability to accurately measure discontinuity lengths and heights.
- 2.2.8. Ability to accurately measure discontinuity locations within weld cross section and to differentiate surface-connected discontinuities from subsurface discontinuities.

2.3. The ISQ-UTPA angle beam weld quality qualification does not include the following list of factors:

Note: This is not an all-inclusive list and other situation-specific factors can affect angle beam weld quality testing. Oil & Gas asset owners and operators should make considerations for the following scenarios that may affect UTPA weld quality examinations including application-specific training, procedures, and appropriate samples for procedure validation.

- 2.3.1. Clad and weld overlay materials with potential disbonds and/or cracking between materials
- 2.3.2. Detection and evaluation of advanced damage mechanisms such as HIC, SOHIC, SCC, HTHA, etc.
- 2.3.3. UTPA examinations at elevated or cryogenic temperatures
- 2.3.4. UTPA examinations through thermal spray aluminum (TSA) coating
- 2.3.5. UTPA examinations of non-metallics

- 2.3.6. UTPA examinations of exotic corrosion-resistant alloys such as nickel alloy, super duplex, etc.

Note: The ISQ exam evaluates technician ability to accurately measure discontinuities within the ranges listed in this protocol and is not considered an accuracy limitation of UTPA measurement equipment.

3. REFERENCES

The following documents are referenced herein and are considered supporting documentation for this protocol. Unless otherwise specified below, refer to the latest edition of the referenced documents.

- 3.1. ASNT Certification Services, LLC (ASNT CS) documents
- 3.1.1. **ASNT Recommended Practice No. SNT-TC-1A: Personnel Qualification and Certification in Nondestructive Testing Personnel**
 - 3.1.2. **ASNT CP-189: Standard for Qualification and Certification of Nondestructive Testing Personnel**
 - 3.1.3. **UT-PTP9** ASNT CS procedure for ultrasonic phased array angle beam ASME weld examination of carbon steel components
 - 3.1.4. **AEC-1** Authorized Examination Center (AEC) Program document requirements
 - 3.1.5. **QP-ISQ-2** Industry Sector Qualification-Oil & Gas program
 - 3.1.6. **AEP-1** Authorized Examination Proctor (AEP)
 - 3.1.7. **AEP-2** AEP Examination Administration at Remote Locations
- 3.2. Industry Codes and Standards
- 3.2.1. **International Organization for Standardization (ISO)**
 - 3.2.1.1. **ISO-9712** Non-destructive testing – Qualification and certification of NDT personnel
 - 3.2.2. **American Society of Mechanical Engineers (ASME)**
 - 3.2.2.1 **ASME BPVC**, Section V: *Nondestructive Examination*, Article 4, *Ultrasonic Examination Method for Welds*
 - 3.2.3. **ASTM International (ASTM)**
 - 3.2.3.1 **ASTM E164** *Standard Practice for Contact Ultrasonic Testing of Weldments*

4. ACRONYMS

- 4.1. **AEC** – Authorized examination center
- 4.2. **AEP** – Authorized examination proctor
- 4.3. **ANSI** – American National Standards Institute
- 4.4. **API** – American Petroleum Institute
- 4.5. **ASME** – American Society of Mechanical Engineers
- 4.6. **ASNT** – The American Society for Nondestructive Testing
- 4.7. **ASNT CS** – ASNT Certification Services LLC
- 4.8. **ASTM** – ASTM International (formerly the American Society for Testing and Materials)
- 4.9. **BPVC** – *ASME Boiler & Pressure Vessel Code*
- 4.10. **CMC** – Certification Management Committee
- 4.11. **HAZ** – Heat-affected zone
- 4.12. **ID** – Inside diameter (opposite scanning surfaces)
- 4.13. **ISQ** – Industry sector qualification
- 4.14. **NDT** – Nondestructive testing
- 4.15. **OD** – Outside diameter (scanning surfaces)
- 4.16. **O&G** – Oil & Gas
- 4.17. **UTPA** – Ultrasonic testing phased array
- 4.18. **UTSW** – Ultrasonic testing shear wave

5. DEFINITIONS

- 5.1. **Authorized examination center (AEC):** An organization with facilities and personnel, independent of the NDT technician’s employer, that has been authorized and approved by the ASNT CS CMC to administer NDT qualification examinations.
- 5.2. **Authorized examination proctor (AEP):** An individual who has been authorized and approved by the ASNT CS CMC, and the ASNT CS Certification Department, to administer NDT qualification examinations at an AEC or an approved remote examination location.

- 5.3. **Candidate:** An individual seeking qualification in accordance with this document.
- 5.4. **Certification Management Committee (CMC):** The ASNT CS committee that has the overall responsibility for developing and maintaining the technical content of all ASNT CS certification programs and shall have the sole responsibility for the determination of certification outcomes in those programs.
- 5.5. **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.
- 5.6. **Industry sector qualification (ISQ):** A qualification program where performance demonstration examinations are given to an NDT technician, for a specific NDT technique applicable to a given industry sector, that assesses competency in performing examinations. The ISQ shall be awarded to candidates upon successful passing of the performance examination.
- 5.7. **ASNT CS Certification Department:** The ASNT CS department is responsible for the administration and facilitation of ASNT CS certification programs in accordance with procedures developed by the ASNT CS CMC.
- 5.8. **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.
- 5.9. **ISQ 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 CS CMC.
- 5.10. **Test sample:** A sample of a product form containing known discontinuities used in practical examinations.

6. RESPONSIBILITIES

- 6.1. The test samples, procedures, grading criteria, test keys, and other confidential information relating to this program shall be maintained confidentially with the ASNT CS Certification Department and approved by review from the ISQ Steering Committee.
- 6.2. All examination applications shall be processed through the ASNT CS Certification Department and shall meet the requirements established within this procedure.
- 6.3. All test samples shall be fingerprinted to establish the truth data for exam grading keys by the CMC.
- 6.4. Examinations shall only be administered by ASNT CS AECs utilizing AEPs, or at ASNT CS authorized remote sites utilizing AEPs, that meet the requirements for the AEC-1 document and ISQ-O&G program as established by the steering committee.

- 6.5. Grading shall not be conducted at the AECs or remote examination sites by AEPs. Completed hard-copy exams shall be sent back to ASNT CS by the AEC or AEP. This will be completed using either email or fax, where the exams will be graded directly by the ASNT CS Certification Department and results notification will be sent by email on an expedited basis within five business days.

7. EXAMINATION PREREQUISITES

- 7.1. All O&G-UTPA candidates shall apply to ASNT CS through the ASNT CS website.
- 7.2. All O&G-UTPA candidates shall understand that the expected prerequisite level of competency to sit for this exam is at least equal to a Level II ultrasonic testing certification per the guidelines in SNT-TC-1A.
- 7.3. All O&G-UTPA candidates shall have first successfully passed the ASNT CS O&G-UTT and O&G-UTSW qualifications. These are a one-time required prerequisite.
- 7.4. Guidance on the ultrasonic weld examination techniques can be found in *ASME BPVC*, Section V: Article 4 and ASTM E164.
- 7.5. Candidates shall present a color digital photo along with a unique email address as part of their application. Photos must be a passport or government-issued license-style headshot. Photos may be taken on devices such as personal digital cameras, cell phones, or webcams. The image format shall be JPG, GIF, or PNG.
- 7.6. At the examination center or remote examination location, the AEP will match the name on the candidate's ID to the name in their system (candidate's name as it appears on their ASNT account). The name on the candidate's ID must match exactly, ***no exceptions***. If the candidate's ASNT account name does not match the name on their ID, they need to contact ASNT CS as least 72 hours prior to the exam in order to update their record.
- 7.6.1. Identification (ID) Requirements:
- 7.6.1.1. The first and last name that the candidate uses to register must match exactly the first and last name on any IDs presented on exam day.
- 7.6.1.2. All IDs required must be issued by the country in which the candidate is testing. If the candidate does not have a qualifying primary ID issued from the country they are testing in, an international travel passport from their country of citizenship is required, along with a secondary ID.
- 7.6.1.3. Candidates are required to present *original* (no photocopies or digital IDs), *valid* (unexpired) IDs; one form as a primary ID (government issued with name, recent recognizable photo, and signature) **and** one form as a secondary ID (with at least a name and signature, or name and recent recognizable photo) if requirement in 7.6.1.2 is not met. See table below for reference:

PRIMARY ID		SECONDARY ID
International Travel Passport Driver's License Military ID (including spouse and dependents) Identification Card (national/state/province identity card)	Alien registration card (green card, permanent resident, visa) Local Language ID (not in Roman characters) – accepted only if issued from the country the candidate is testing in	Any ID containing at least name and signature, or name and recognizable photo that meets above ID requirements

7.6.2. Additional Identification Allowances:

7.6.2.1. Expired forms of ID are not acceptable unless accompanied by valid renewal papers.

7.6.2.2. If a government issued ID is missing a visible signature, or has an embedded signature, the candidate will be allowed to test if the other requirements for primary and secondary IDs are met.

8. EXAMINATION TEST SAMPLES

8.1. Test Samples – All O&G-UTPA examination samples shall be evaluated with phased array angle beam ultrasonics by at least three ASNT CS certified UT Level III technicians certified for phased array from the CMC and/or Steering Committee to establish the truth data for the examination keys. All O&G-UTPA examination samples shall also be evaluated with an advanced ultrasonic technique that provides encoded and recorded data along with discontinuity imaging; full matrix capture and/or TOFD. Note that the advanced methods are utilized only for a data record to be used for reference, the exam keys will be created solely by the phased array angle beam fingerprinting.

8.2. All equipment used for truth data collection and evaluations shall be calibrated with traceability to national standards.

8.3. All examination test sample discontinuities shall be assigned a difficulty rating value at time of truth data determination. This value shall be initially established by the CMC Level IIIs determining the sample truth data. These values shall be in the range of 0.3 to 0.95 (30 to 95%) representing the expected percentage of phased array ultrasonic technicians who would be able to correctly evaluate the specific discontinuity in question.

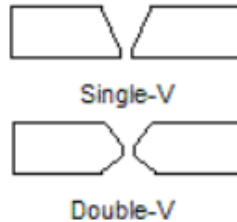
8.4. ASNT CS may complete reviews of the pass/fail statistics for the UTPA samples to evaluate the current difficulty ratings of samples in the database. If significant variations are observed during these reviews the ISQ Steering Committee will decide what action, if any, shall be taken.

8.5. Examination sample sets shall be made up of a group of discontinuities that the cumulative difficulty rating value is in the range of 0.5 to 0.8, 50 to 80% pass rates from statistics gathered. This process shall assist with ensuring comparable difficulty across all UTPA exam sample sets.

8.6. Material of test samples shall be low alloy-type carbon steel.

8.7. Wall thickness of test samples shall be within the following range: from 0.250 to 1.5 in. (9.5 to 38.1 mm).

- 8.8. UTPA test samples may be of either flat plate or curved section product form. Curved section samples should not have a radius smaller than that of an ANSI 6 in. outside diameter pipe and weld length to be a minimum of 12 in. for all samples.
- 8.9. Test samples may have single-V or double-V preparation welds in them.



- 8.10. Curved samples shall only contain circumferential girth welds.
- 8.11. The number of test samples per ISQ-O&G-UTPA exam shall be four (4).
- 8.12. Discontinuities on test samples may be natural or artificial.
- 8.13. Test samples shall contain discontinuity types from the following list:
- 8.13.1. Weld toe crack (OD or ID)
 - 8.13.2. Root crack on ID (circumferential only)
 - 8.13.3. HAZ crack (circumferential only)
 - 8.13.4. Subsurface centerline crack
 - 8.13.5. Lack of sidewall fusion
 - 8.13.6. Sidewall crack
 - 8.13.7. Lack of root fusion
 - 8.13.8. Incomplete penetration
 - 8.13.9. Slag inclusion
 - 8.13.10. Porosity
- 8.14. Individual test samples shall contain a number of discontinuities within the following range: from zero (0) to five (5).
- 8.15. Test samples shall be free of coating and base material discontinuities.
- 8.16. Test samples shall have a zero-datum position clearly marked. This is the position all discontinuities detected shall be measured from for location purposes along the length of the weld. The zero-datum position mark shall also detail the direction of travel from the datum, so it

is clear which direction to measure from on full pipe sections.

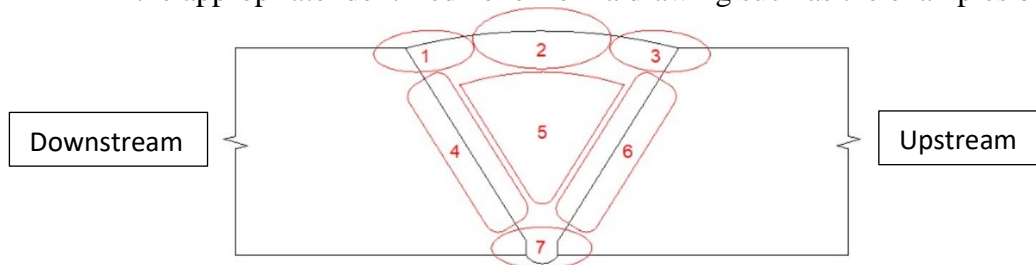
- 8.17. All test samples shall be uniquely identified by an appropriate permanent marking method to ensure traceability for each sample. Such marking shall not interfere with the practical examinations of the test samples and shall be concealed from candidates with alternative identification marking while the test samples are being used for examinations.
- 8.18. Test samples shall have an identified, and clearly marked, upstream and downstream side of each weld. The upstream or downstream side of each weld shall be referenced when identifying the cross-sectional location of any discontinuities reported.
- 8.19. There shall be a master test sample examination key report maintained by the ASNT CS Certification Department Staff.
- 8.20. All test samples shall have a cover attached to the back-side surface (opposite scanning surface) to mask any discontinuity types present on the test samples.
- 8.21. Test samples shall have a maximum number of uses during examinations at any given AEC or region. When the maximum number of exposures is reached at any given location or region, the test samples shall be either sent back to ASNT CS, or to another AEC or region, and replaced with other O&G-UTPA samples from the test sample pool for that AEC or region.

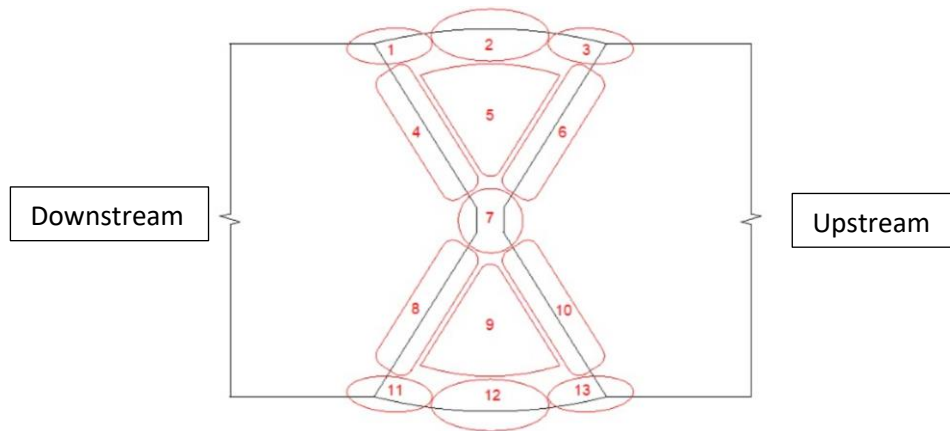
9. EXAMINATIONS

- 9.1. Examination guidelines and the examination procedure, UT-PTP9, shall be made available to the technicians before the examination, and can be found at any time, through the ASNT CS ISQ website.
- 9.2. The examination guidelines and UT-PTP9 should be read and understood before a candidate applies for an examination. The candidate shall be expected to follow the examination guidelines and UT-PTP9 during the examination. Failure to do so may cause a failure on the exam.
- 9.3. The candidate shall have a maximum of eight (8) hours to complete the examination, including calibration time, scan plan development, encoded data collection and data analysis for examination of two (2) test samples, manual (non-encoded, freehand) scanning of two (2) test samples, and filling out all reporting paperwork. For computerized examinations additional time shall be allowed for electronic data entry and submission of the examination report, however no access to the test samples shall be allowed after the eight (8) hour timeframe has passed.
- 9.4. Questions may be asked to the AEP only. Specific questions about the exam content shall not be answered.
- 9.5. The candidate shall examine two (2) plate samples with encoded, recorded data collection. Only the recorded data shall be used for the exam of these two plate samples. One plate sample shall be a single-V weld and one plate sample shall be a double-V weld. The candidate will **not** be allowed to free-hand raster scan the plate samples.
- 9.6. The candidate shall develop scan plans to provide full coverage of welds and heat-affected zones (HAZ) on both sides of the weld for the two (2) plate samples on the exam. The scan plans shall be evaluated by the proctor prior to data collection on the samples. If the candidate is unable to design adequate scan plans to fully cover the area of interest, the proctor will not allow the

candidate to complete their exam and it will be counted as incomplete.

- 9.7. The candidate shall examine two (2) pipe samples with manual (non-encoded, freehand) scanning.
- 9.8. Each test sample shall be examined to determine the presence and type of any discontinuities in the weldment, HAZ, and by scanning the entire sample weld. Possible discontinuity types are detailed above in section 8.13. The discontinuities detected that meet or exceed the reporting level threshold value, detailed in the examination guidelines and UT-PTP9, shall be recorded and reported.
- 9.9. The location from datum to the start of each discontinuity shall be recorded and reported.
- 9.10. The length of each discontinuity shall be recorded and reported.
- 9.11. The height of each discontinuity shall be recorded and reported for the samples that are examined with encoded, recorded data.
- 9.12. The cross-sectional locations of discontinuities in the weld samples shall be recorded and reported by zone.
 - 9.12.1. The cross-sectional location of each discontinuity recorded shall be reported as one of the possible options listed on the report form such as:
 - 9.12.1.1. OD weld toe (upstream or downstream)
 - 9.12.1.2. ID weld toe (for double-V weld preparations, upstream or downstream)
 - 9.12.1.3. ID weld centerline (root for single-V weld preparations and ID cap center for double-V weld preparations)
 - 9.12.1.4. Mid-wall weld fusion face/zone (upstream or downstream)
 - 9.12.1.5. Mid-wall weld centerline
 - 9.12.1.6. OD weld centerline (cap)
 - 9.12.2. The cross-sectional location of any given discontinuity shall be reported by selecting the appropriate identified zone from a drawing such as the examples below:





9.13. These data reporting requirements, items 9.9 through 9.12 above, may be pull-down menu type selection lists on computerized exams.

10. EXAMINATION GRADING

Sample Scanning Exam

- 10.1. A candidate shall be graded on discontinuity detection, discontinuity characterization, discontinuity location (distance from 0 datum), discontinuity length sizing, discontinuity height sizing, and cross-sectional placement of discontinuities (proper zone selection). Discontinuity length and height sizing are graded separately from detection, characterization, location, and cross-sectional placement.
- 10.2. Detection and characterization grading on the exam is comprised of three categories that are separated out into two columns on Table 1 below in Section 10.5. Column 1 covers missed discontinuities and incorrect calls and Column 2 covers false calls. The three categories are defined below.
- 10.3. The following errors will count against a candidate on their exam grading:
- 10.3.1. Missed discontinuity – candidate failed to detect a discontinuity in the location where a discontinuity exists.
 - 10.3.2. Incorrect call – candidate incorrectly characterized a discontinuity type or incorrectly positions and/or sizes a discontinuity.
 - 10.3.2.1. For the purpose of incorrect calls, a candidate will receive credit if calling a discontinuity within the same discontinuity-type group. -Characterization shall only be reported for the nonencoded pipe samples. -The two discontinuity-type groups are planar discontinuities and volumetric discontinuities.
 - 10.3.2.1.1. Planar discontinuities consist of all cracks, lack of fusions, and incomplete penetration.
 - 10.3.2.1.2. Volumetric discontinuities consist of slag inclusions and porosity.
 - 10.3.2.2. If a candidate calls a discontinuity in an incorrect location distance from

datum it will be considered an incorrect call. -In order to get credit for a discontinuity distance from datum, the recorded start position shall be within ± 0.5 in. (12.7 mm) of the actual start position.

10.3.2.3. If a candidate calls a discontinuity in an incorrect cross-sectional position (zone), Item 9.12 above, then it will be considered an incorrect call.

10.3.2.4. Discontinuity lengths that are reported by the candidate to be considerably shorter or longer than the actual discontinuity length will be graded as an incorrect call on their exam. The allowable discontinuity reported length tolerances to receive credit for the discontinuity length are:

10.3.2.4.1. For discontinuities less than or equal to (\leq) 0.5 in. (12.7 mm) in actual length, the allowable tolerance for length sizing is two times (2x) the actual discontinuity length and the allowable undersizing is 1/2 (50%) of the actual discontinuity length.

10.3.2.4.2. For discontinuities greater than ($>$) 0.5 in. (12.7 mm) in actual length, the allowable tolerance for length sizing is the actual discontinuity length +0.5 in. (12.7 mm) and the allowable undersizing is the actual discontinuity length – 0.5 in. (12.7 mm).

10.3.2.5. Discontinuity heights that are reported by the candidate to be considerably greater or lesser than the actual discontinuity height will be graded as an incorrect call on their exam. Discontinuity heights shall only be reported for the encoded plate samples. -The allowable discontinuity reported height tolerances to receive credit for the discontinuity height are:

10.3.2.5.1. For discontinuities with heights less than or equal to (\leq) 0.250 in. (6.35 mm) in actual height, the allowable tolerance for height sizing is -0.0625 in. (1.59 mm)/+0.125 in. (3.175 mm) from the actual height.

10.3.2.5.2. For discontinuities with heights greater than ($>$) 0.250 in. (6.35 mm) in actual height, the allowable tolerance for height sizing is -0.125 in. (3.175 mm)/+0.250 in. (6.35 mm).

10.3.3. False call – candidates call a discontinuity where no discontinuity exists.

10.3.4. Candidates shall not incur multiple errors from a single discontinuity on Table 1, e.g., an incorrectly characterized discontinuity that is also placed in an incorrect zone shall not be graded as an incorrect call twice.

10.4. Discontinuity length and height sizing on the exam are graded separately and contained in Table 2 below in Section 10.5.

10.4.1. Candidates shall not incur multiple errors from a single discontinuity on Table 2, e.g., a discontinuity with both an incorrect height and length shall not be graded as an

incorrect call twice.

- 10.5. The following grading criteria shall be applied to the candidates reporting for the *entire sample set*:

TABLE 1

Discontinuity Detection and Characterization Grading		
Column 1 Missed Discontinuities and Incorrect Calls (characterization-/classification, Distance from Datum, and Zone)	Column 2 False Calls	Score
1	0	Pass
2	0	Pass
0	1	Pass
0	2	Pass
1	1	Pass
1	2	Pass
2	1	Pass
2	2	Fail
3	0	Fail

TABLE 2

Discontinuity Sizing Grading	
Column 1 Missed Length or Height	Score
1	Pass
2	Pass
3	Pass
4+	Fail

Must pass both parts to pass exam.

- 10.6. Candidates shall be allowed to retake the exam per the retake requirements detailed in the QP-ISQ-2 program document.

11. QUALIFICATION VALIDITY

- 11.1. Candidates who successfully pass the O&G-UTPA exam shall be qualified for a period of three (3) years from the date they receive notification of qualification.
- 11.2. ASNT CS may withdraw or revoke ISQ credentials if the performance or ethics of the technician does not meet ASNT CS requirements at any time during the validity period.

12. AUTHORIZED EXAMINATION CENTERS

- 12.1. Only ASNT CS AECs or approved locations shall be utilized for the administration of ISQ-O&G

exams. Specific requirements for AECs can be found in the ASNT CS AEC-1 document.

13. AUTHORIZED EXAMINATION PROCTORS

13.1. Only ASNT CS approved AEPs shall be utilized for the administration of ISQ-O&G exams. Specific requirements for AEPs can be found in the ASNT CS AEP-1 and 2 documents.

14. CONFLICT RESOLUTION

14.1. Candidates shall submit any inquiries or conflicts, among the ISQ documents or program, in writing, to ASNT CS for resolution.