

GULT Qualification and Certification Scheme

GUL 101:2018

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1 Introduction

Guided Wave Testing (GWT) is an NDT method which allows rapid, in-service inspection of pipes and other structural elements and is recognised by many international organisations; see for example *BS 9690-1:2011*, and *ASTM E2775 – 16*. The guided wave testing method may be applied to a variety of product sectors, including (but not limited to), pipes, rails and plates. Additionally, within these product sectors, application sectors have been defined which combine the competency requirements for common industrial applications. This certification scheme is generic to all product and application sectors of GWT using Guided Ultrasonics Ltd. (GUL) equipment, the referenced application sector specific documents indicate any sector specific information.

This certification scheme has been developed to comply with ISO 17024:2012 (Personnel Certification). Furthermore, the training, qualification and certification requirements listed in this document and its Annexes have been written to comply with those stated in ISO 9712:2012. Where no requirements are listed in ISO 9712:2012 for the GWT method, GULT (in consultation with an independent and industry-led Advisory Committee) has defined requirements which are appropriate for the method.

Guided Ultrasonics Ltd. Training (GULT) is a division of Guided Ultrasonics Ltd (GUL). GULT fulfils the role of a certification and qualification body for the scheme described in this document. GULT may also perform training as an authorized training organisation provided that impartiality is maintained, in accordance with ISO 17024:2012. Success in the qualification examinations described in this document leads to the award of GULT certification covering Guided Wave Testing using GUL equipment only. The GULT certification scheme has been developed to replace the existing GUL certification scheme, transition of certified individuals from GUL to GULT certification is covered in the document *GULT Transitional Arrangements*.

The GULT Advisory Committee has been set up to fulfil the requirements of an Impartiality Committee in accordance with ISO/IEC 17021 and to advise on the drafting of this document. Full details of its operation are set out in the *Terms of Reference for the Advisory Committee*.

2 Scope

This document prescribes the general requirements and procedures by which personnel may be tested and certified by GULT. It also sets out the requirements for administering and maintaining the GULT certification system.

3 Abbreviations

ASTM	American Society for Testing and Materials
BS	British Standard
GUL	Guided Ultrasonics Ltd.

GULT	Guided Ultrasonics Ltd. (Training)
GWT	Guided Wave Testing
NDT	Non-destructive Testing

4 References

ASTM E2775 – 16. Standard Practice for Guided Wave Testing of Above Ground Steel Pipework Using Piezoelectric Effect Transduction

BS 9690-1:2011. Non-destructive testing. Guided wave testing. General guidance and principles

ISO 9712:2012. Non-destructive testing -- Qualification and certification of NDT personnel.

ISO 17000. Conformity assessment – Vocabulary and general principles

ISO 17021. Conformity assessment – Requirements for bodies providing audit and certification of management systems

ISO 17024. Conformity assessment – General requirements for bodies operating certification of persons

TW-011 – GULT Code of Ethics

TF-147 – GULT Evidence of industrial experience for Level 1 inspectors

TF-148 – GULT Evidence of industrial experience for Level 2 inspectors

TF-149 – GULT Evidence of continued satisfactory work activity

GULT Terms of Reference for Advisory Committee

GULT Transitional arrangements

5 Terms and Definitions

For the purpose of this document, the terms and definitions given in ISO 17000 and the following apply.

5.1 assessment

process that evaluates a person's fulfilment of the requirements of the certification scheme

5.2 candidate

individual who has fulfilled specified prerequisites and has been admitted to the certification process

5.3 certification process

activities by which a certification body determines that a person fulfils certification requirements, including application, assessment, decision on certification, recertification and use of certificates and logos/marks

5.4 competence

ability to apply knowledge and skills to achieve intended results

5.5 examination

mechanism that is part of the assessment which measures a candidate's competence by one or more means, such as written, oral, practical and observational, as defined in the certification scheme

5.6 examiner

person competent to conduct and score an examination, where the examination requires professional judgement

5.7 invigilator

person authorized by the certification body who administers or supervises an examination, but does not evaluate the competence of the candidate

5.8 significant interruption

absence or change of activity which prevents the certified individual from practising the duties corresponding to the level in the method and the sector(s) within the certified scope, for either a continuous period in excess of one year or two or more periods for a total time exceeding two years

5.9 supervision

monitoring and regulating of processes, or delegated activities. In this document supervision does not require the supervisor to be physically present at all times during the activity

6 Duties and Responsibilities

6.1 The Certification Body (GULT)

6.1.1 GULT will act as a certification body fulfilling the requirements of ISO/IEC 17024, ensuring that the GULT scheme for qualification and certification of personnel, and the assessment and certification of systems, are controlled and operated so as to ensure, amongst other things, 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 provision of certification services.

6.1.2 GULT will act as a qualification body to carry out examinations.

6.1.3 GULT will approve Examination Centres where GULT examinations may be conducted.

6.1.4 GULT will maintain impartiality between training and certification activities.

6.2 Employers

6.2.1 Employers shall ensure that inspectors are appropriately qualified and are working to authorised procedures. A list of recommended qualifications for common inspection applications is given in Annex 2.

6.2.2 The employer shall confirm the validity of the personal information provided by the candidate, including the declaration of education, training and experience

required for eligibility.

- 6.2.3** 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), GWT procedures, equipment, and acceptance criteria for the products tested.
- 6.2.4** The employer shall ensure that candidates gaining experience for certification are supervised by appropriately qualified personnel.
- 6.2.5** With regard to certificated persons, the employer shall be responsible for:
- verification of visual acuity in accordance with ISO 9712:2012;
 - verification of continuity in the application of GWT without significant interruption.

6.3 Candidates

Candidates shall:

- 6.3.1** Provide documentary evidence of satisfactory completion of a course of training acceptable to GULT.
- 6.3.2** Provide documentary evidence, verified by their employer and in a form acceptable to GULT that experience has been gained under the supervision of appropriately qualified personnel.
- 6.3.3** Provide documentary evidence of vision satisfying the requirements of ISO 9712:2012.
- 6.3.4** Abide by the GULT Code of Ethics (TW-011).
- 6.3.5** Assume all of the responsibilities described for the employer if self-employed.

6.4 Certificate holders

Certificate holders shall

- 6.4.1** Undergo an annual test of visual acuity in accordance with ISO 9712:2012.
- 6.4.2** Notify GULT and their employer in the event that the conditions for validity of visual acuity certification are not fulfilled.
- 6.4.3** Abide by the GULT Code of Ethics (TW-011).

7 Qualification Sectors

7.1 General

GWT qualification sectors, which are described in the sections below, have been defined by GULT as Product, Application and Industrial. Qualification levels are also defined which follow the guidelines outlined in ISO 9712:2012.

A full list of sectors and the relationship between the qualification levels and sectors is given in Annex 1.

7.2 Product Sectors

Product sectors are defined as physical product types. All products listed within a product sector are tested using similar GWT techniques, equipment and analysis tools. These product sectors are therefore defined as separate Level 1 qualifications.

7.3 Application Sectors

Application sectors are defined as specific applications within a product sector. These involve advanced GWT techniques and require significant experience in the relevant product sector and are therefore defined as Level 2 qualifications.

7.4 Industrial Sectors

Industrial sectors consist of one or more related product and application sector. These require advanced knowledge of the product and applications as well as experience of all relevant GWT techniques within the industrial sector and are therefore defined as Level 3 qualifications.

8 Qualification Levels

8.1 Level 1

An individual certified to Level 1 has demonstrated the competence to carry out GWT under the supervision of appropriately qualified personnel. Level 1 personnel may be authorised by their employer to perform the following in accordance with written GWT procedures:

- set up equipment;
- carry out the test;
- record and classify the results in terms of written criteria;
- report the results.

8.2 Level 2

8.2.1 Level 2 personnel have demonstrated competence to perform and supervise GWT activities according to approved procedures within the qualifications stated on their certificate. Level 2 personnel may be authorised by the employer to:

- select the GWT technique to be used;
- define the limitations of applications;
- set up and verify equipment settings;
- carry out and supervise all Level 1 duties;
- interpret and evaluate results according to applicable standards, codes or specifications;
- organise and report the results of non-destructive tests;
- translate GWT standards and specifications into GWT instructions (within the scope and limitations of the qualifications held);
- provide training at Level 1 where authorised by GULT.

8.3 Level 3

8.3.1 Level 3 personnel have demonstrated:

- a competence to interpret and evaluate GWT results in terms of existing codes, standards and specifications;
- possession of the required level of knowledge in applicable materials, fabrication and product technology sufficient to enable the selection of GWT equipment and techniques, and to assist in the establishment of test criteria where none are otherwise available;
- a general familiarity and knowledge of other NDT methods and equipment.

8.3.2 Level 3 personnel are qualified to direct any GWT operation for which they are certified and may also carry out any of the following:

- assume full responsibility for a test facility or examination centre and staff;
- establish, review for editorial and technical correctness and validate GWT instructions and procedures;
- interpret codes, standards, specifications and procedures;
- designate the particular techniques and procedures to be used;
- within the scope and limitations of any certification held carry out all Level 1 and Level 2 duties;
- provide training at or below Level 2 if authorised by GULT;
- provide guidance and supervision at all levels.

9 Eligibility

9.1 General

The candidates shall fulfil the minimum requirements for vision and training prior to the qualification examination and the minimum requirements for industrial experience prior to certification.

9.2 Training Requirements

- 9.2.1** The training requirements for all GULT qualifications are clearly defined in the specific requirements document for each application sector. These documents detail a minimum syllabus, minimum training hours and examination formats.
- 9.2.2** To be eligible for examination, candidates must have successfully completed, prior to making application for examination, a course of training authorised by GULT covering the relevant parts of the syllabus published in the application sector specific documents.

9.3 Industrial Experience

- 9.3.1** Industrial GWT experience for Level 1 and Level 2 may be acquired prior to or following success in the qualification examination. All experience must be specific to GUL equipment and appropriate for the level and application sector of the qualification being sought.
- 9.3.2** Evidence of experience satisfying the requirements, as set out in the application sector specific documents, shall be confirmed by the employer and submitted to GULT for review prior to the award of GULT certification.
- 9.3.3** Where experience is sought following successful qualification examination, the results of the examination shall remain valid for 2 years.

9.4 Vision Requirements

See section 6.3.3.

10 Level 1 and 2 Qualification Examinations

10.1 General

The qualification examination shall cover a single product or application sector for the GWT method. The examination content differs between Levels 1, 2 and 3 qualifications therefore those are described separately below.

10.2 Examination Content

Level 1 and Level 2 examinations consist of written and practical sections. Level 2 candidates will also be required to draft a written instruction suitable for Level 1 personnel.

The examination formats, number of questions and required pass marks for each qualification are set out in the relevant application sector specific documents.

10.3 Written Examinations

- 10.3.1** The written examination shall consist of 15 general and 35 specific multiple choice questions. The general and specific parts of the exam may be presented in a single examination paper, with the general and specific sections indicated, or as two separate exam papers, at the discretion of GULT.
- 10.3.2** The general examination questions shall include only questions general to the GWT method selected from GULT's collection of approved general exam

questions valid at the date of the exam.

10.3.3 The specific examination questions shall include only questions specific to the relevant application sector selected from GULT's collection of approved specific exam questions valid at the date of the exam.

10.3.4 The time allowed for each examination shall be defined in the application-sector specific documents. If the specific and general parts are given in a single exam paper the total time is the sum of the times for each individual part.

10.4 Practical Examinations

10.4.1 The practical examination consists of a computer test and an equipment test and will be of sufficient duration, complexity and scope to adequately verify the candidate's ability to apply the GWT method to real test situations. The time allowed for each part of the practical examination is detailed in the application sector specific documents.

10.4.2 The data files used for the computer test will be selected from a collection of approved exam files which are appropriate to the qualification sought. These files may be prepared using previously collected data or computer generated examples.

10.4.3 The number of data files and the time allowed for the computer examination are specified in the application sector specific requirements documents.

10.4.4 Computer exam files shall be digitally protected to prevent unauthorised access, uniquely identified and have an approved master report. A documented and approved procedure shall be followed in the preparation of master reports.

10.4.5 For the equipment test the candidate will follow the GWT instruction(s) provided by the exam invigilator.

10.5 GWT instruction

10.5.1 Level 2 candidates shall draft a GWT instruction suitable for Level 1 personnel for a specified application which is appropriate to the relevant application sector.

10.5.2 The GWT instruction shall be marked in accordance with the guidance given in ISO 9721:2012.

10.6 Grading of Level 1 and Level 2 examinations

10.6.1 The pass marks and weighting factors for each examination are given in the specific documents for each sector. The sectors are listed in Annex 1.

10.6.2 In order to be eligible for certification the candidate shall obtain the minimum passing grades for each examination as listed in the relevant application sector specific document.

10.6.3 The general, specific, practical and written-instruction examinations shall be graded separately. Where conventional pre-prepared paper-based examinations are used an examiner shall be responsible for the grading of the examinations by comparison with the GULT approved model answer.

10.6.4 GULT may, at its discretion, use e-assessment systems that automatically score

candidate responses according to prepared algorithms.

11 Level 3 Qualification Examinations

11.1 General

Level 3 examinations shall consist of a basic and main method examination in accordance with the recommendations found in ISO 9712:2012 Section 8.3.

11.2 Basic Examination

11.2.1 This written examination shall assess the candidate's knowledge of the basic subjects by means of multiple choice questions. See Table 1 for the number of questions per subject

11.2.2 In order to pass the basic examination the candidate shall obtain a minimum grade of 80% in each of parts A, B and C.

11.2.3 The result of the basic examination will remain valid for 3 years.

Table 1 Number of questions in the Basic Exam for Level 3

Part	Subject	Number of Questions
A	Technical knowledge of materials science and process technology	25
B	Knowledge of the certification body's qualification and certification system (this may be an open book examination)	10
C	General knowledge of at least 2 application sectors within the product sector in question	20 for each sector (total 60)

11.3 GWT Method Examination

11.3.1 This written examination shall assess the candidate's knowledge of GWT using the number of multiple choice questions for each subject shown in Table 2.

11.3.2 In order to pass the GWT method examination the candidate shall obtain a minimum grade of 80% in each of parts D, E and F.

11.3.3 The GWT procedure shall be marked in accordance with the recommendations found in ISO 9712:2012 Table D.2.

Table 2 Number of questions in the GWT Method Exam for Level 3

Part	Subject	Number of Questions
D	Level 3 theoretical knowledge of GWT	30
E	Application of GWT in the product sector concerned including the applicable codes, standards, specifications and procedures.	20
F	Drafting of one GWT procedure in the relevant sector. The applicable codes, standards, specifications and procedures shall be available to the candidate.	-

12 Conduct of Examinations

12.1 General

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

12.1.2 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 GULT qualification examinations for 12 months.

12.2 Examination Centres

GULT examinations shall be conducted at locations approved by GULT and under the control of an authorised GULT examiner or invigilator. The authorising individual shall complete and sign a declaration which confirms that the examination was conducted in accordance with GULT guidelines, specifically:

- Examination facilities were adequate;
- All required equipment and resources were available;
- Approved examination material was used;
- Examination records were completed according to GULT requirements.

12.3 Preparation of Examinations

12.3.1 All GULT examinations shall be prepared by GULT authorised examiners and approved by GULT.

12.3.2 Physical exam specimens used during the equipment examination are used solely to demonstrate the competency of the candidate in the setup and use of the equipment and are therefore not themselves inspected. These specimens are therefore not subject to any restrictions or control other than that stated in the relevant written instruction for the examination.

12.4 Examination Equipment and Documentation

12.4.1 All necessary reference standards will be provided by GULT. Candidates must

not be in possession of any reference documentation other than that provided by GULT.

12.4.2 Candidates are not permitted to have mobile telephones or any portable memory devices in any GULT examination area during the examination.

12.4.3 Candidates shall be provided with a GULT authorised laptop for the purpose of completing the examinations.

12.5 Invigilation of Examinations

12.5.1 GULT authorised examiners and examination invigilators 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 Training Manager shall be the final arbiter.

12.5.2 GULT examinations may be invigilated by a GULT authorised examiner or GULT authorised invigilators.

12.5.3 Invigilators are permitted to record (by video) the actions and responses of the candidate during the equipment examination (where required) to allow the examination to be remotely graded by a GULT authorized examiner.

12.5.4 An invigilator is permitted to invigilate an exam for a candidate, or candidates, which he has trained for that exam provided that the exam is conducted strictly under the approved exam conditions as specified by GULT.

12.6 Grading of Examinations

12.6.1 An examiner shall not be permitted to grade the examination of a candidate that he has trained for the examination for a period of two years from the date of conclusion of the training unless the examination material (answer papers or data files) are anonymous.

12.6.2 An examiner shall not be permitted to grade the examination of a candidate that works in the same facility as the examiner unless the examination material (answer papers or data files) are anonymous.

12.7 Re-examination

12.7.1 A candidate whose examination results have not been accepted for reason of fraud or unethical behaviour shall wait at least 12 months before re-applying for examination.

12.7.2 A candidate who fails to obtain the pass grade for any examination part may be re-examined once in the failed part(s), provided the re-examination takes place not sooner than one month, unless further training acceptable to GULT is satisfactorily completed, nor later than twelve months after the original examination.

12.7.3 Pass marks for each part of the examinations are listed in the application-sector specific documents.

12.7.4 A candidate who fails a re-examination shall apply for and take the full examination according to the procedure established for new candidates.

12.8 Examination Results

- 12.8.1** All candidates will be issued with a standard GULT examination results notice normally within 21 days of completion of examination, provided all examination fees have been paid.
- 12.8.2** Candidates who fail any part of the examination will be provided with brief reasons for failure on the results notice.

13 Certification Process

13.1 General

- 13.1.1** Application forms which ask for specific details on experience and training to the published syllabus 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 application will be invalidated.
- 13.1.2** Provision is made wherever possible for candidates with a disability which may affect their ability to complete GULT examinations. For example, up to 25% additional time may be allowed in examinations for candidates suffering from conditions such as dyslexia. The candidate is responsible for bringing his or her disability to the attention of the qualification body at the time of application for the certification.

13.2 Initial Application for Certification

- 13.2.1** Initial applications to GULT must be made on an application form available directly from GULT. Candidates shall submit the following information as part of the initial application:
1. documentary evidence of vision satisfying the requirements of ISO 9712:2012;
 2. documentary evidence of enrolment on, or satisfactory completion of, a course of training acceptable to GULT for the certification sought.

13.3 Submission of Supplementary Evidence

- 13.3.1** In order to complete the certification process the candidates will be required to submit any evidence which was not submitted at the time of the initial application:
1. documentary evidence of satisfactory completion of a course of training acceptable to GULT for the certification sought;
 2. documentary evidence of satisfactory completion of the qualification examination for the certification which is sought;
 3. Evidence of industrial experience using form TF-147 for Level 1 candidates or form TF-148 for level 2 candidates, which are available from GULT on request.

13.3.2 The submission of supplementary evidence may be made up to 12 months following the successful completion of the qualification examination.

13.4 Decision on Certification

13.4.1 Once the GULT administration office is in possession of the evidence that all pre-requisites (training, experience, vision and success in the relevant GULT qualification examination) have been satisfied the application shall be reviewed and final approval given.

13.4.2 Following approval a GULT record of certification and qualification card will be issued which includes the following information:

1. the full name of the certified individual;
2. the date of certification;
3. the date upon which certification expires;
4. the level of certification;
5. the product, application or industrial sectors;
6. a unique GULT identification number;
7. photo of the certificate holder.

NOTE: By issuing the certificate and/or the corresponding qualification card, GULT attests to the certification of the individual but not to any work carried out under the certification.

13.4.3 Verification of current GULT certification is available from training@guided-ultrasonics.com.

13.5 Validity of Certification

13.5.1 The period of validity is 3 years for Level 1 and Level 2 certification and 5 years for Level 3 certification.

13.5.2 Certification becomes invalid:

1. At the discretion of the GULT Advisory Committee, for example after reviewing evidence of behaviour incompatible with the GULT code of ethics.
2. If the individual becomes physically incapable of performing his duties based upon failure of vision exams or other assessments taken under the responsibility of his employer.
3. If a significant interruption takes place in the application of the GWT method in the sector for which they are certified.
4. If the individual fails recertification.

13.6 Revalidation (All Levels)

13.6.1 For revalidation of certification required due to unethical behaviour the individual shall obtain the permission of the Advisory Committee to re-apply for recertification no sooner than 1 year after invalidation of certification.

13.6.2 For revalidation of certification after a significant interruption the individual

shall complete a recertification examination.

13.7 Renewal of Certification (All levels)

13.7.1 After the first period of validity, certification may be renewed by GULT for a further certification period on production of:

1. Documentary evidence of satisfactory visual acuity within the previous 12 months.
2. Documentary evidence of continued satisfactory work activity without significant interruption for all of the application sectors which are sought using form TF-149, which is available from GULT on request.

13.7.2 To ensure continuity, it is advisable to submit applications for renewal at least 56 days prior to certificate expiry.

13.7.3 Applications for renewal after the certificate has expired may be considered up to one year after expiry but will be subject to payment of an additional administration fee.

13.7.4 If the expiry exceeds 12 months the candidate shall be permitted to attempt a recertification exam, provided that the requirements of 13.7.1 are met.

13.8 Recertification (Levels 1 and 2)

After the second period of validity, and every 6 years thereafter, the certificate holder may be recertified by GULT for a further 3 years provided that the certificate holder meets the criteria for renewal specified in 13.7.1 and meets the applicable conditions described in the following sections.

13.8.1 Level 1 certificate holders shall successfully complete the practical computer test section of the Level 1 qualification exam for the appropriate product sector.

13.8.2 Level 2 certificate holders shall successfully complete the practical computer and written instruction part for the appropriate application sector.

13.8.3 Successful completion of the Level 2 recertification requirements shall automatically result in the Level 1 recertification of the candidate in the product sector concerned.

13.8.4 Where success in the recertification procedure occurs within the 90 days prior to expiry of the certificate, the new certificate will expire three years after the expiry date of the certificate being renewed.

13.8.5 In the event of failure in a recertification examination GULT will immediately cancel the certificate concerned, issuing a new record of certification that no longer shows the product or application sector concerned, and sending this with an explanatory letter to the certificate holder asking for the return of the superseded record of certification.

13.9 Recertification (Level 3)

After the second period of validity, and every 10 years thereafter, the Level 3 certificate holder may be recertified by GULT for a further 5 years provided that the certificate holder meets the criteria for renewal specified in 13.7 and provides evidence of

continued qualification by:

- a. Satisfying the Level 3 requirements of Section 11.3 for a GWT method examination;
- b. Meeting the requirements for a structured credit system, as given in Annex 3

The individual may decide between the examination and the credit system for recertification.

13.9.1 A candidate who applies for recertification under the structured credit system but fails to meet the requirements shall be recertified by GWT method examination in accordance with Section 11.3.

13.9.2 The individual shall successfully complete a Level 3 main method exam as specified in 11.3 in the method and sectors concerned.

13.9.3 If the individual fails to achieve the passing grade for the recertification examination, a maximum of two retests of the recertification exam shall be allowed within 12 months.

13.9.4 If the individual fails the two allowable retests or if recertification is applied for more than 12 months after expiry, a complete main method examination for Level 3 including the Level 2 practical computer test shall be required.

13.9.5 Successful completion of the Level 3 recertification requirements shall automatically result in the Level 2 and Level 1 recertification of the candidate in the product and application sectors concerned.

13.10 Change of Employer

13.10.1 Change of employer shall not be cause for recertification.

14 Certification and Examination Records

14.1 General

GULT will retain records of certification issued as a result of success in any GULT examination for a minimum period of 11 years. A database of certified personnel, which includes (amongst other things) the name, GULT identification number and scope of certification held by each individual, is maintained by GULT. Verification of the certification status of individual GULT certified personnel can be requested form training@guided-ultrasonics.com.

14.2 Complaints and Appeals

14.2.1 GULT certificate holders must recognise that personal integrity and professional competence are the fundamental principles on which their testing activities are founded. Accordingly, it is a condition of GULT certification that certificate holders shall undertake to comply with a code of ethics, which is published as TI-011.

14.2.2 An aggrieved party in a dispute, which considers itself to have reasonable

grounds for questioning the competency or ethical behaviour of a GULT certified individual or his employer, may petition the GULT Advisory Committee for withdrawal or cancellation of certification. Such a petition must be accompanied by all relevant facts and, if it is the view of the GULT that an adequate case has been presented, an investigation of the circumstances under dispute will be initiated.

- 14.2.3** If the petition is substantiated to the satisfaction of the GULT Advisory Committee, the certification may be cancelled, or renewal or recertification may be refused, for such period as the Advisory Committee may decide, unless the holder of certification is successful in a further examination, the content of which will be decided by the Advisory Committee.
- 14.2.4** Appeals against certificate cancellation, failure to certify or failure to renew may be made by the candidate or the employer upon application in writing to the chairman of the GULT Advisory Committee.
- 14.2.5** The GULT Advisory Committee may delegate the process of dealing with complaints and appeals to a properly constituted sub-committee.

14.3 Use and Misuse of Certificates

- 14.3.1** The issue of a GULT certificate indicates that the holder has demonstrated an acceptable level of competence measured by means of the relevant examination conducted in accordance with the requirements on the date indicated using a particular set of equipment on a specific product. Certificate holders or employers are not permitted to imply any further degree of competence on the basis of the certificate.
- 14.3.2** GULT certificate holders or their employers must not use or refer to GULT certificates, nor the GULT logo, nor must they knowingly allow them to be used or referred to by a third party, in a manner that may be considered fraudulent or to bring the GULT Scheme into disrepute.
- 14.3.3** The penalty for misuse of GULT certification in all cases is invalidation of the certificate. If the misuse was in the public domain, publication of the transgression may also be undertaken. Any misuse, which appears to be an infringement of the law, will result in the matter being reported to the police.
- 14.3.4** Certificates are valuable documents which should be kept in a safe place. Any suspicion of forgery or misrepresentation must be reported to GULT.
- 14.3.5** Loss or theft of certificates must be reported to the appropriate authorities and to GULT.

Annex 1: List of Product, Application and Industrial Sectors

Table 3 lists currently applicable product, application and industrial sectors for GWT under the GULT qualification and certification scheme and how these sectors relate to qualification levels.

Table 3 Sectors for GWT

Level 1 Product Sectors	Level 2 Application Sectors	Level 3 Industrial Sectors
Pipe, Tube and Rod (P)	Supports and Process Pipework (SP)	Pipe, Tube and Rod (PTR)
	Road Crossings and Buried Pipe (XB)	
	Advanced Applications (AA)	
	Monitoring Analysis (PM)	
Rail (R)	Rail Crossings (XR)	Wrought Products (WRP)
Bar and Wire (W)	Not yet defined	
Quantitative Inspection (Q)	Touchpoint Supports (QT) Welded Supports (QW) All support types (QS)	

Qualification examples

- Level 1: P Level 1 in the product sector 'Pipe, Tube and Rod'
 Level 2: XB Level 2 in the application sector 'Road Crossings and Buried Pipe', Product sector 'Pipe, Tube and Rod'.
 Level 3: PTR Level 3 in the industrial sector 'Pipe, Tube and Rod'

Annex 2: Recommended Qualifications Required for Common Applications

Application description	Type of Application	Minimum qualification level and sector
Specific applications		
Basic pipe	Basic	Level 1: Pipe (P)
Mineral wool insulation	Basic	Level 1: Pipe (P)
Polyurethane foam insulation	Intermediate	Level 2: Supports and Process Pipe (SP)
Process pipe-work	Intermediate	Level 2: Supports and Process Pipe (SP)
Testing of high temperature pipe-work	Intermediate	Level 2: Supports and Process Pipe (SP)
Road crossings or bund walls	Intermediate	Level 2: Road Crossings and Buried Pipe (XB)
Noisy pipe	Intermediate	Level 2: Supports and Process Pipe (SP) or Level 2: Road Crossings and Buried Pipe (XB)
Buried pipe	Advanced	Level 2: Road Crossings and Buried Pipe (XB)
Testing of concrete anchors or embedded penetrations	Advanced	Level 2: Supports and Process Pipe (SP)
Testing of sphere legs under concrete fireproofing	Advanced	Level 2: Road Crossings and Buried Pipe (XB)
Risers	Advanced	Level 2: Road Crossings and Buried Pipe (XB)
Lamp posts	Intermediate	Level 2: Road Crossings and Buried Pipe (XB)
Testing pipes with different contents		
Gas-low velocity	Basic	Level 1: Pipe (P)
Low viscosity liquid	Basic	Level 1: Pipe (P)
High viscosity liquid	Intermediate	Level 2: Supports and Process Pipe (SP)
Liquids that leave attenuating internal deposits	Intermediate	Level 2: Road Crossings and Buried Pipe (XB)
Identification of specific pipe defects		
Minor general corrosion	Basic	Level 1: Pipe (P)
Medium or severe general corrosion	Intermediate	Level 2: Supports and Process Pipe (SP) or Level 2: Road Crossings and Buried Pipe (XB)
Erosion	Intermediate	Level 2: Supports and Process Pipe (SP)
Defects in bends	Intermediate	Level 2: Supports and Process Pipe (SP)
Defect in weld	Intermediate	Level 2: Supports and Process Pipe (SP)
Identifying corrosion under simple supports	Intermediate	Level 2: Supports and Process Pipe (SP)
Identifying corrosion under clamped supports	Advanced	Level 2: Supports and Process Pipe (SP)
Identifying corrosion under welded supports	Advanced	Level 2: Supports and Process Pipe (SP)
Testing pipes with coatings		
Paint	Basic	Level 1: Pipe (P)
Polyethylene coating	Basic	Level 1: Pipe (P)
FBE coating	Basic	Level 1: Pipe (P)
Bitumen wrapping	Advanced	Level 2: Road Crossings and Buried Pipe

		(XB)
Concrete lining	Advanced	Level 2: Road Crossings and Buried Pipe (XB)
Monitoring of pipe		
Installation of gPIMS and Analysis of monitoring data	Advanced	Level 2: Monitoring Analysis (PM)
Different pipe materials		
All metallic pipe materials	Basic	Level 1: Pipe (P)
Polyethylene	Advanced	Level 3: Pipe (PTR)
Sub-sea		
All sub-sea activities are currently considered advanced	Advanced	Level 3: Pipe (PTR)
Rail		
Plain rail	Basic	Level 1: Rail (R)
Level crossings	Advanced	Level 2: Rail crossings (XR)
Other rail applications	Advanced	Level 3: Wrought Products (WRP)
Quantitative Short Range Inspection		
Touchpoint corrosion	Advanced	Level 2: Touchpoint supports (QT) or Level 2: QS
Welded support corrosion	Advanced	Level 2: Welded supports (QW) Level 2: QS
Any other support type	Advanced	Level 2: QS

Annex 3: Structured Credit System for Level 3 Recertification

The following requirements are in accordance with the recommendations found in ISO 9712:2012.

In this system the Level 3 candidate gains credit for participation, during the period of validity of their certificate prior to recertification (normally 5 years), in the various activities shown in Table 4. Limits are placed on the maximum number of points which can be gained in each year, and in an activity to ensure an even spread of activities.

To be eligible for recertification the candidate shall achieve a minimum of 70 points where a maximum of 25 points are permitted per year.

The candidate shall submit evidence of satisfying the criteria as follows:

- Agenda for meetings under items 1-4;
- A brief description of research and development under item 5;
- References of technical or scientific publications under item 5;
- A summary of training delivered under item 6.

Table 4 Structured credit points allocation

Item	Activity	Pts. per item	Max. pts. per year per item	Max. pts. per 5 years per item
1	Membership of an NDT society, attendance at seminars, symposia, conferences and/or courses covering GWT and related sciences and technologies	1	3	8
2 a)	Attendance at international and national standardization committees	1	3	8
2 b)	Convenorship of standardization committees	1	3	8
3 a)	Attendance at sessions of other GWT committees	1	3	8
3 b)	Convenorship of sessions of other GWT committees	1	3	8
4 a)	Attendance at sessions of GWT related working groups	1	5	15
4 b)	Convenorship of GWT related working groups	1	5	15
5 a)	GWT related technical/scientific contributions or publications	3	6	20
5 b)	GWT related research work published	3	6	15
5 c)	GWT research activity	3	6	15
6	GWT technical instructor (per 2 h) and/or NDT examiner (per examination)	1	10	30
7	Development of GWT applications	1	5	15

Annex 4: Document Change Register and Approvals

Revision	Author	Changes
2016-07-12	Mark Evans	Initial release of document for approval
2018-05-29	Mark Evans	Minor changes to comply with UKAS recommendations and to include Quantitative Short Range (QSR) qualifications.

Revision	Reviewed by:	Approved by:	Date
2016-07-12	Thomas Vogt	GULT Advisory Committee	09/08/16
2018-05-29	David Alleyne	GULT Advisory Committee	29/05/18