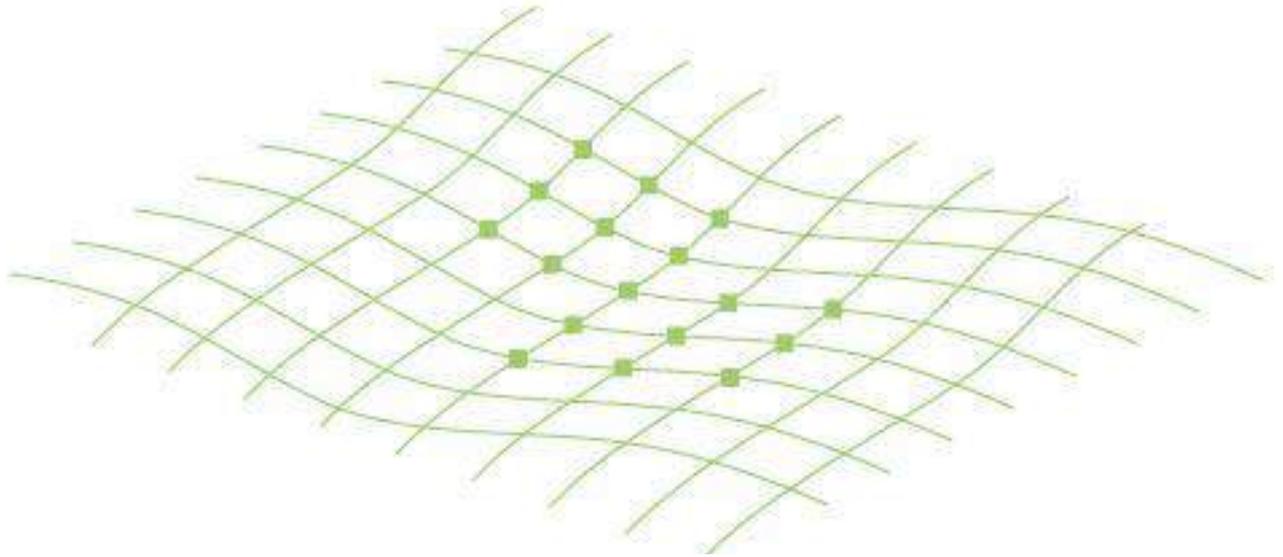


# *Welding Performance Qualification Test*

## *Administrators*

### *GUIDE FOR APPLICANTS*



**TECHNICAL  
SAFETY BC**

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## **1.0 Introduction**

This manual provides guidelines which outline the policies for the recognition of an organization or person as competent to administer performance qualification tests for pressure welders in accordance with Section 42 of the Power Engineers, Boiler, Pressure Vessel and Refrigeration Safety Regulation (the Regulation).

A welder, welding operator, brazer or brazing operator who is required to use a Technical Safety BC registered welding or brazing procedure must hold a pressure welder's certificate of qualification. To qualify for a pressure welder's certificate of qualification a welder must complete a performance qualification test. This test must be conducted by an individual or organization recognized by the provincial safety manager as competent to administer the test or by a Technical Safety BC Safety Officer. On successful completion of the test, the welder receives a completed performance qualification record (QB 484, QW-484) which is submitted to Technical Safety BC along with the completed FRM-0802 Registration of Welding Performance Qualification.

## **2.0 Applying for a Certificate of Recognition for Welding Performance Qualification Testing**

An organization or individual may make application to a provincial safety manager to be recognized by the Provincial Safety Manager as competent to administer performance qualification tests for pressure welders. The organization or person must provide proof of relevant training, work experience, qualifications and conformity assessment procedures to verify that testing will be administered in conformance to legislative and code requirements.

2.1 An applicant for a Certificate of Recognition must:

- i. complete the "Certificate of Recognition Application" form and pay the required fee;
- ii. submit a Quality Control Manual detailing the scope of tests, information on qualification of personnel and test procedures to be performed. The quality control program shall establish that all the requirements of the Regulation, CSA B51 and ASME Section IX will be met. The program shall be suited to the type and complexity of the testing to be administered;
- iii. have the current publications of the codes and standards, required for the intended scope of work detailed in the Quality Control Manual. As minimum the applicant shall have current editions of the following publications:

- Safety Standards Act, Safety Standards General Regulation and the Power Engineers, Boiler, Pressure Vessel and Refrigeration Safety Regulation
  - CSA B51
  - ASME Section II Part C
  - ASME Section IX; and
- iv. have the applicant's training, work experience, qualifications and quality control manual reviewed by Technical Safety BC. After completion of the review, a Safety Officer may make assessments of the applicant's facility and test procedures to enable the Safety Officer to verify that the quality control program has been established and operates as specified in the quality control manual. On successful completion of the review and assessment the applicant will be granted a Certificate of Recognition verifying that the organization or person is competent to administer performance qualification tests.

### **3.0 Updating Quality Assurance Program**

Holders of Certificates of Recognition are responsible for updating their quality assurance programs and quality control manuals so that they conform to any changes in codes, standards, or legislation. Failure to comply with the requirements as set out in the Safety Standards Act and Regulations, applicable codes or standards, may result in the suspension or withdrawal of the Certificate of Recognition. The provincial safety manager shall be informed of any address, ownership, organizational or quality control program changes. If an organization certified to administer welder qualification tests is sold the new owner is required to make application for certification as a welder performance test administrator.

### **4.0 Fees**

The fees for a Welder Performance Test Administrator Application will be based on an hourly professional rate in the Boiler Fee Schedule (<http://www.safetyauthority.ca/>), with a minimum charge of five hours, for the review of the applicant's training, work experience, qualifications and quality control manual and Safety Officer assessment. Certificates of Recognition will be renewed annually on the anniversary date. The fee for renewal is the hourly professional rate based on a one hour charge. Welder Performance Test Administrators may be subject to an assessment by Technical Safety BC at any time.

## 5.0 Guidelines for Quality Assurance System

The following is a guide which details the required features of a quality assurance system which shall be detailed in the Quality System Manual of an organization which administers welding performance qualification tests. As a minimum, each organization shall address the required features relative to the scope of work to be performed. Organizations shall explain their intent, capability and applicability for each required feature outlined in this section. Work may be subcontracted provided controls are clearly defined for maintaining full responsibility for compliance to the Power Engineers, Boiler, Pressure Vessel and Refrigeration Safety Regulation and ASME codes by the organization administering the test.

a) Title Page

The name and complete address of the company administering the welding performance qualification tests shall be included on the Title Page of the Quality System Manual.

b) Approval and Revision History

A listing of the revision number, date and a description of the revision shall be provided. The name and signature of the individuals reviewing and accepting the revisions shall be included.

c) Contents Page

The manual should contain a page listing the contents of the manual by subject, number (if applicable) and revision number of each document.

d) Glossary of Terms

A listing of the terms and acronyms used in the manual and their meanings

e) Scope of Work

The manual shall clearly indicate the scope and type of welding performance qualification tests the organization is capable of administering and intends to carry out.

f) Statement of Authority and Responsibility

A dated *Statement of Authority*, signed by an officer of the organization, shall be included in the manual. Further, the *Statement of Authority* shall include:

- 1) A statement that all welding performance qualification tests administered by the organization shall meet the requirements of the Power Engineers, Boiler, Pressure Vessel and Refrigeration Safety Regulation and ASME codes, as applicable;
- 2) A statement that if there is a disagreement in the implementation of the Quality System, the matter is to be referred for resolution to a higher authority in the company;

3) The title of the individual who will be responsible to ensure that 1) above is followed and has the freedom and authority to carry out the responsibility.

g) Manual Control

The manual shall include the necessary provisions for revising and issuing documents to keep the manual current. There shall be provisions for controlling the distribution of the manual and revisions. The title of the individual authorized to approve revisions shall be included in the manual. Revisions must be accepted by the Provincial Safety Manager or Safety Officer prior to issuance of the manual and its implementation.

h) Organization

An organizational chart shall be included in the manual. It shall include the title of the heads of all departments or divisions that perform functions that can affect the welding performance qualification testing and it shall show the relationship between each department or division. The manual shall identify the title of those individuals responsible for preparation, implementation, or verification of the Quality System. The responsibilities shall be clearly defined and the individuals shall have the organizational freedom and authority to fulfill those responsibilities.

i) Personnel Qualifications

The manual shall detail the qualifications, knowledge and experience for all positions that perform functions related to the welding performance qualification testing.

### Minimum Requirements

In order to meet the minimum knowledge and experience requirements, an individual administering welding performance qualification testing for an organization shall have a CSA W178.2 Level 2 or Level 3 Welding Inspector Certification with an ASME Section VIII/IX endorsement or a current Welding Examiner Certificate of Competency issued by ABSA.

The manual shall detail the methods for recording and controlling the qualifications, knowledge and experience. Education and training records for individuals administering welding performance qualification testing shall include;

- 1) Course or program name,
- 2) Subjects included in course or syllabus
- 3) Training or program provider,
- 4) Course duration
- 5) Course completion date, and
- 6) Certifications, diplomas or degrees obtained and a copy of the certificate, diploma or degree

Qualifying experience records for individuals administering welding performance qualification testing shall include;

- 1) Employer name, address, contact name and employment dates
- 2) Job responsibilities

#### Organizations Which Formerly Held A TA Contractor's License

In 2012 organizations holding a "Testing Agency" (TA) qualification were granted a C of R and permitted to continue performing welder testing using the personnel and processes in place at the time of the transition. As a minimum individuals administering welding performance qualification testing for an organization which formerly held a TA contractor's license issued by the BC government shall have:

- 1) A combination of at least 3 years of experience in layout and fitting, manual, semi-automatic or automatic welding, welding inspection, welding supervision, weld testing or welding instruction along with successful completion of a recognized training course in the fundamental principles of welding, quality control and welding inspection; and
- 2) Successfully completed a recognized educational course (minimum of 2 years in length) in Welding Engineering Technology, Welding Engineering or an equivalent course covering the fundamental principles of welding, quality control and welding inspection or is a journeyman welder;

Individuals administering welding performance qualification testing shall be able to demonstrate that they have satisfactory knowledge of:

- 1) The principles of operation, applicable equipment, relevant process variables and common weld discontinuities for SMAW, GMAW, FCAW, GTAW and SAW welding processes
- 2) The nomenclature, classification, manufacture, properties, applications, composition, grouping and designations of electrodes, welding wires and fluxes as referenced in ASME Section II-Part C
- 3) Material specifications for metals including chemical composition, yield strength, tensile strength, ductility, hardness and toughness and material test reports as referenced in ASME Boiler and Pressure Vessel codes
- 4) The applications, examination processes, requirements, uses, benefits, limitations, physical weld defects, and acceptance criteria of the following NDE methods as detailed in ASME Section V for visual examination, radiographic examination and ultrasonic examination
- 5) The examination and assessment of weld test coupons for weld defects and acceptability standards referenced in ASME Section IX

- 6) ASME Section IX including:
- i. Organization, testing, acceptance criteria, variables, forms, welding data
  - ii. Preparation and evaluation of welding procedure specifications, procedure qualification records and welding performance qualifications
  - iii. Performance qualification testing, welder performance variables, performance qualification tests, examinations and performance limitations

Individuals holding a CSA W178.2 Level 2 or Level 3 Welding Inspector Certification with a ASME Section VIII/IX endorsement or a current Welding Examiner Certificate of Competency issued by ABSA meet the minimum knowledge and experience requirements.

- j) Document Control  
The manual shall contain controls to ensure that all documentation for weld performance testing, test instructions, codes, standards and regulations are prepared or obtained, revised, updated and controlled.
- k) Materials  
The manual shall describe the method used to ensure that only acceptable materials and welding consumables are used for the welding performance qualification tests. The manual shall include a description of how existing material is identified and new material is ordered, verified, and identified. The manual shall identify the title of the individual(s) responsible for each function and a brief description of how the function is to be performed.
- l) Method of Performing Testing  
The manual shall describe the methods for carrying out and documenting the welding performance qualification testing including examination and test procedures.
- m) NDE and Heat Treatment  
The manual shall describe controls for nondestructive examination, and heat treatment. The manual is to indicate the title of the individual(s) responsible for the welding procedure specification (WPS). The manual shall also describe controls for ensuring that the required WPS or PWP is available to the welder or welding operator prior to welding. Similar responsibility for nondestructive examination and heat treatment shall be described in the manual.
- n) Examinations and Tests  
The manual shall detail the procedures for examinations and tests upon completion of the welding performance qualification testing.

- o) Calibration  
The manual shall describe a system for the calibration of examination, measuring, and test equipment used in the welding performance test.
- p) Reports and Records  
The manual shall indicate the title of the individuals responsible for preparing, completing and signing, the welding performance test forms. The distribution of the forms shall be described in the manual. Provisions for the retention and maintenance of the records shall be included.
- q) Nonconforming Items  
There shall be a system for the correction of nonconformities. A nonconformance is any condition that does not comply with the applicable rules of the Power Engineers, Boiler, Pressure Vessel and Refrigeration Safety Regulation, ASME codes, or the quality system. Nonconformance must be corrected or eliminated before testing is completed.
- r) Internal Audits  
The manual shall detail requirements for internal audits to review each element of the quality system and implement improvements to the testing program. Technical Safety BC shall be permitted to review the testing organizations policies, procedures, documentation, quality programs and facilities after giving reasonable notice of the intention to do so.
- s) Review and Appeal Process  
There shall be a process for test candidates to request a review of the testing procedures and process for the resolution of complaints. Reviews should be restricted to issues pertaining to the administration of the test such as test procedures, conduct of the examiner, inadequate facilities or other issues that obstructed the candidate in successfully completing the test and not failure of a properly administered test.
- t) Exhibits  
Any forms referenced in the manual shall be included. The form may be a part of the referencing document or included as an appendix. For clarity, the forms may be completed and identified as examples. The name and accepted abbreviations of the testing administration organization shall be included in the manual.

## **Appendix**

### ***Sample of a Quality Control Manual***

This sample manual is intended to assist in the development of a quality control manual for an organization which administers welding performance qualification tests. It is not to be used to replace or interpret the requirements of the Safety Standards Act, Safety Standards General Regulation and the Power Engineers, Boiler, Pressure Vessel and Refrigeration Safety Regulation, CSA B51 or the ASME Codes. The sample manual may not include all of the requirements for a quality control manual, but rather details the primary aspects that the applicant is required to include in the written Quality Control (QC) Manual. The content and detail in a manual will be dependent on the scope of work, size and complexity of the organization. The QC Manual must contain the description of the controls necessary for implementing the conformity assessment program but, it is not required to contain all of the detailed programmatic requirements which will be found in the program, such as written procedures.

The manual must describe the actual system in use and cover all responsibilities for the administration of welding performance qualification tests. When preparing the manual input and support should be obtained from all staff in the organization including management, test administrators and purchasing.

The manual is to be used as a working document for use by the organizations personnel and may also be reviewed by persons outside of the organization and therefore it should give a clear understanding of the conformity assessment program for welding performance qualification testing.

The manual should state the title of persons responsible for each function or procedure. These titles must be the same as those shown on the organizational chart and be consistent throughout the manual.

A description of each form, report, tag, or other document used in the conformity assessment program should be provided and the procedures for the use of each document detailed. Exhibits of each document should be added to the manual.

The manual should be divided into separate sections for each item or topic in the conformity assessment program.

**Title Page (Manual's Cover or First Page )**

*The title page must include the contractor's full company name and address. The title of the manual must be included as well as the revision, control number for the manual and the person to whom the controlled copy is assigned as shown in the example below:*

Quality Control Manual  
For the Administration of  
Welding Performance Qualification Tests

Company Name

Company Address

Controlled Manual No. \_\_\_\_\_

Assigned To:  Name

Revision # \_\_\_\_\_ (Date)

**Approval and Revision History**  
***Sample Manual***

Rev #	Date	Description of Revision
0	Jan 1, 2010	Initial Issue

Manual Revisions  
Reviewed by:

\_\_\_\_\_ Date: \_\_\_\_\_  
Name Signature

Manual Revisions  
Accepted by:

\_\_\_\_\_ Date: \_\_\_\_\_  
Technical Safety BC Safety Officer Signature

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## **1. Glossary of Terms**

“ASME” means American Society of Mechanical Engineers

“CGSB” means Canadian General Standards Board

“Code” means ASME Boiler and Pressure Vessel Codes

“NDE” means Non-Destructive Testing

“SO” means British Columbia Technical Safety BC Safety Officer

“WPQ” means Welder Performance Qualification

“WPS” means Welding Procedure Specification

## 2. Scope of Work

*Describe the scope of welding performance qualification tests the organization is capable of and intends to carry out:*

- *describe the scope of the activities to be undertaken;*
- *describe the code or standards work will conform to*
- *list the testing locations;*
- *describe the scope of work undertaken at each test location, and the address of each location;*
- *indicate whether activities are undertaken at test locations and/or at field sites;*
- *state the title of a person designated to perform QC function at each site, and, the title of a person who is overall responsible for maintenance and assuring effective implementation of the QMS at all locations.*
- *if an organization does not have a testing location, and undertakes field activities only, the organization shall indicate that the activities undertaken are at field sites controlled from an office address of the company.*

This manual describes the procedures that organization's name will use for the administration of welding performance qualification tests in accordance with Power Engineers, Boiler, Pressure Vessel and Refrigeration Safety Regulation, and CSA-B51 and ASME Section IX. The welding performance qualification tests will be administered at address of the testing location and field sites throughout British Columbia. All testing will be controlled from office address of the organization.

organization's name will administer welding performance qualification tests for welding processes (e.g. SMAW, GTAW, GMAW, FCAW, -SAW etc) in accordance with ASME Section IX (latest edition and addenda) and qualify the tests using guided bend tests or by radiographic examination.

organization's name will contract all Heat Treatment and Nondestructive examination.

For work beyond the scope of the testing detailed in this manual qualified testing organizations will be retained who will work to the requirements of a quality control manual approved by Technical Safety BC.

### 3. Statement of Authority

The purpose of this manual is to implement the conformity assessment program to be used by organization's name for the administration of welding performance qualification tests in accordance with the Safety Standards Act, Power Engineers, Boiler, Pressure Vessel and Refrigeration Safety Regulation, CSA B-51 and ASME Section IX.

The name of position (e.g. shop manager) is responsible for the implementation and maintenance of the program and has the authority to ensure compliance with its requirements.

Any unresolved problems regarding compliance with this program, jurisdictional or code requirements shall be brought to the attention of name of position for resolution within the jurisdictional, code or this manual's requirements.

Signature \_\_\_\_\_  
*name of organization's position* \_\_\_\_\_ *Date*

## 4. Manual Control

This section describes the system for preparing, revising and controlling the distribution of this Quality System Manual. The name of position (e.g. quality control manager) is responsible for implementing the conformity assessment program and shall approve this manual as evidenced by the signature and date on the "Approval and Revision History" page.

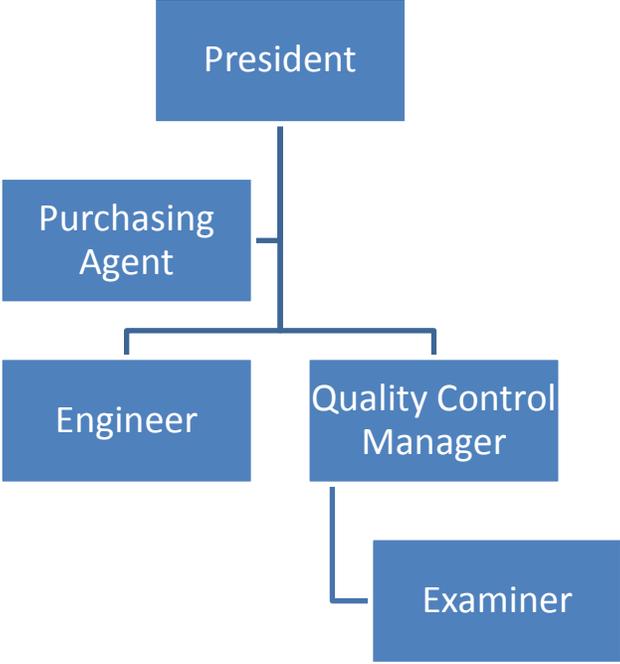
The name of position (e.g. quality control manager) shall:

- i. Approve all changes to the Quality System Manual, by signature and date on the Revision Summary page.
- ii. Ensure that the Revision No. date and page number are shown on each page of the manual. Revised paragraphs will be indicated by a vertical line in each margin alongside the changed paragraph(s).
- iii. Issue manual revisions to all persons who are assigned controlled manuals with instructions that superseded pages are to be destroyed.

If additional controlled manuals are issued, the name of position (e.g. quality control manager) will keep a list indicating manual numbers and who they are assigned to. Uncontrolled manuals may be issued for information but shall not be used for administration of welding tests. "Uncontrolled" shall be indicated on the front page of these manuals.

A controlled copy of this manual must be available at all times, on sites where work under this Quality System is being performed. This copy must be made available to Technical Safety BC Boiler Safety Officer upon request.

**5. Organization**



## 6. Personnel Qualifications

name of position (e.g. quality control manager) shall be the holder of a name of certificate of qualification (e.g. CSA W178.2 Level 2 or Level 3 Welding Inspector or a Welding Examiner Certificate of Competency issued by ABSA.) and be responsible for ensuring that all personnel appointed as name of position (eg. welding examiner) are qualified in accordance with the procedures in this manual.

name of position (e.g. welding examiner) shall be the holder of a name of certificate of qualification (eg. CSA W178.2 welding inspector , ABSA welding examiner certificate etc.) to administer welding performance qualification tests.

A file for each name of position (e.g. welding examiner) containing:

Education Records

- 1) Course or program name,
- 2) Subjects included in course or syllabus
- 3) Training or program provider,
- 4) Course duration
- 5) Course completion date, and
- 6) Certifications, diplomas or degrees obtained and a copy of the certificate, diploma or degree

Experience Records

- 1) Employer name, address, contact name and employment dates
- 2) Job responsibilities

Letter of appointment

signed by the name of position (e.g. quality control manager)

shall be maintained.

## 7. Document Control

name of position (e.g. quality control manager) shall be responsible for verifying that:

- 1) welding procedures are registered with Technical Safety BC.
- 2) Procedure Qualification Records are signed by the company for which welder testing is to be conducted.
- 3) a copy of the Welding Procedure Specification is available to the welder or during the performance qualification test.
- 4) copies of the WPS and PQR used during testing are maintained on file.
- 5) a copy of the completed QW-484A or QW-484B is maintained on file.
- 6) a controlled copy of this Quality System Manual is available during testing at Field locations.

name of position (e.g. quality control manager) shall be responsible for the maintenance of the following codes and standards to the latest edition and addenda:

- 1) ASME Section II Part A, Part C
- 2) ASME Section V
- 3) ASME Section IX
- 4) CSA B51

## 8. Materials

The name of company position will by means of a Purchase Order (exhibit #1) purchase all welding materials, pipe, tubing, plate, fittings and all appurtenances used in the work to be performed. All the material specifications are to be taken off the approved drawing issued by the name of company position.

The Purchase Order, as a minimum, will contain the job number, the material specifications, identify if Material Test Reports or Certificates of Compliance are to be supplied. The purchase order may contain additional information as deemed necessary by the name of company position. Substitution of material may not be made without the approval of the name of company position.

Upon receiving the material the name of company position will check the material for obvious defects or any damage that may have occurred while the material was in transit. All material will be checked against the Purchase Order and traced to the Material Test Reports or Certificates of Compliance supplied. If the material is found not to be in compliance with ASME Section II code requirements it is to be rejected and a Non-Conformance Report (exhibit #5) issued. When it has been determined that the material meets the requirements of the applicable standard the material will be identified by color coding, labeling, numbering etc., prior to releasing the material for storage or welder testing. Any material that is in non-compliance shall be identified and segregated until the non-compliance has been resolved.

When material is to be cut to size, the name of company position shall transfer the identification markings from the piece containing the original markings prior to cutting or removing from one location to another. Material found not to contain identification marks shall be considered nonconforming and segregated.

A copy of the Purchase Order and Material Test Reports and Certificates of Compliance will be retained in the job file.

## 9. Method of Performing Testing

name of company position (e.g. welding examiner) is responsible to ensure welder testing is conducted to the requirements of standard work procedures and is responsible for completion of the required documentation for the test files.

name of company position (e.g. welding examiner) will:

- 1) verify the candidates qualification in their Welder's Log Book.
- 2) review the WPS and PQR to ensure all essential variables are met for WPQ testing
- 3) ensure the WPS is registered with Technical Safety BC.
- 4) Complete the appropriate parts of the Qualification Record QW-484A or QW-484B.
- 5) issue a Examination and Test Procedure
- 6) issue a copy of the Welding Procedure Specification to the candidate
- 7) assign a test coupon to the candidate
- 8) assign a test area to the candidate
- 9) verify the polarity, voltage and amperage of welding machines supplied by test candidates for accuracy using a calibrated meter

During the performance qualification test, the name of company position (e.g. welding examiner) will:

- a) verify the joint preparation including the root land and root gap
- b) verify the position of the test coupon, i.e.: 2G, 5G or 6G
- c) verify welding power source set-up including amperage and voltage settings
- d) inspect the tack welds for length and feathering
- e) complete the applicable section of the QW-484A or QW-484B.
- f) monitor the root pass to ensure it is done in the correct position and direction, and Visually Inspect the completed root pass for quality including; penetration, fusion, undercut, reinforcement, excessive spatter
- g) monitor the hot pass, fill and cap passes to ensure welding is done in the correct position and within the prescribed time frame

## 10. NDE and Heat Treatment

### Non-Destructive Testing

name of company position (e.g. quality control manager) shall determine all NDE requirements to qualify welders as an alternative to guided bend test. name of company will sub-contract all required NDE to organizations who meet ASME code requirements. name of company position (e.g. quality control manager) shall review the NDE sub-contractors Quality Control Manual to ensure that personnel performing the NDE are qualified in accordance with CGSB requirements.

The NDE sub-contractor shall have procedures to calibrate equipment.

name of company position (e.g. welding examiner) is responsible for reviewing the qualifications of NDE examiners and , identifying the welds to be examined, reviewing NDE reports and radiographic film and ensuring that the radiographs are traceable to the weld coupon

### **Heat Treatment**

name of company position (e.g. quality control manager) shall determine all heat treatment requirements. name of company will sub-contract all heat treating requirements to organizations qualified to perform this type of service. name of company position (eg. quality control manager) shall review the procedures put forth by the sub-contractor to ensure that the requirements conform to ASME code requirements.

The heat treatment procedures shall include but is not limited to the following:

- i. Joint identification
- ii. Material type and thickness
- iii. Time and temperature at starting
- iv. Time and temperature at start of hold time
- v. Time and temperature at end of hold time
- vi. Time and temperature at end of power cut off
- vii. Operators name and the date

A transferable heat treatment record shall be maintained and recorded.

## **11. Examinations and Tests**

Examinations and testing after the completion of testing shall be in accordance with the ASME codes. name of company position (e.g. welding examiner) shall determine all examination and test requirements.

After the performance qualification test welding, the name of company position (e.g. welding examiner) must:

- a) Visually inspect the quality of the weld for reinforcement, weld profile, arc strikes, weld width and undercut
- b) identify the test specimens to be cut out and die stamp for positive identification of specimen number and candidate
- c) identify test coupons to be radiographed and die stamp them with the candidate's identification
- d) monitor the specimen preparation
- e) examine specimen acceptability for width and thickness
- f) verify the guided bend test jig for correct tolerances
- g) complete the required bend tests
- h) assess the acceptability of guided bend tests against acceptance criteria
- i) review radiographic film and reports when radiograph is used for performance qualification testing j) complete the Welder or Welding Operator

- Qualification Record QW-484A or QW-484B k) complete and issue a Technical Safety BC Welder Registration Form.
- j) identify all failed coupons and store them for a minimum of 90 days after completion of the test

Upon completion of the test name of company position (e.g. Welding examiner) will retain on file for a minimum of 7 years the following documentation:

- a) Welder/Welding Operator Qualification Records (b)
- b) NDE Reports and Radiographic Film (c)
- c) Nonconformity Reports (d)
- d) Copies of candidates' Welder's Log Book "A" or "B" Seal
- e) Heat treatment instructions and charts,

All documentation is subject to audit by Technical Safety BC.

## 12. Calibration

name of company position (e.g. quality control manager) is responsible to ensure that all test gauges are in good working order and have not exceeded the calibration due date. All temperature gauges shall be under the control and custody of name of company position (e.g. quality control manager) who will ensure that they are stored in such a manner that the potential of physical damage is minimized.

name of company position (e.g. quality control manager) will ensure that the test gauges are marked with a system that is traceable to a written record of each calibration for each gauge. The record will contain the date of calibration, gauge serial number, and the authorized calibration agent.

All test gauges shall be calibrated once a year as a minimum. Gauge will be checked prior to every use for up to date calibration. Any gauges whose accuracy is suspect, defective, or damaged will be removed for servicing or be discarded. All calibration or repairs will be sub-contracted to a qualified agency who will calibrate the gauges to a nationally recognized standard.

## 13. Reports and Records

name of position (e.g. quality control manager) shall be responsible for verifying that:

- a) welding procedures are registered with Technical Safety BC.
- b) copies of the WPS and PQR used during testing are maintained on file.
- c) a copy of the completed QW-484A or QW-484B is maintained on file.

Records are to maintained for a minimum of 7 years.

## 14. Nonconforming Items

A non-conformity is any condition which does not meet the requirements of this Quality Control Manual, Regulations or codes. This includes physical non-conformities found during receiving of materials, those found during fabrication and final testing, and it also includes errors and omissions in the form of documentation.

When it has been determined that a non-conformity exists, the items shall be marked hold and identified and segregated from the production area until resolution.

In respect to non-conformities with material the material will be rejected and discarded, returned to the supplier, repaired and used, subject to the acceptance of a safety officer or used as is, subject to the acceptance of a safety officer.

It is the responsibility of all employees to identify non-conformities and report them to the name of company position (eg. quality control manager), name of company position (e.g. quality control manager) shall document and record all non-conformities on a nonconformance report which will be placed in the permanent job file. All non-conformities shall be resolved to the satisfaction of a safety officer.

## 15. Internal Audits

name of company position (eg. quality control manager) shall conduct periodic audits of welder performance qualification testing procedures and policies to verify that they are being carried out in accordance with this manual. Audits are to include assessments of written documentation to verify that all records required by the policies in this quality control manual are completed and retained. An audit checklist shall be developed and retained as a record of all audits.

## 16. Review and Appeal Process

If a candidate is not satisfied with the performance qualification test, he / she may notify the name of company position (e.g. welding examiner). Complaints shall be restricted to the procedures for the administration of the test such as test facilities, conduct of the examiner or any issue which prevented the candidate from successfully completing the test and not the failure of a properly administered test. If the issue cannot be resolved the candidate may make a written complaint within 14 days to the name of company position (e.g. quality control manager) who shall conduct a review and issue a written response detailing the findings of the review.

The candidate may request a review of the name of company positions' (e.g. quality control manager) findings within 30 days of the date the findings were issued.

## 17. Exhibits

### LIST OF EXHIBITS

Exhibit 1)	Purchase Order	Page ___
Exhibit 2)	Non-Conformance Report	Page ___
Exhibit 3)	Record of Heat Treatment	Page ___

*Include a copy of each form.*

**EXHIBIT 6.8**

name of company

**NONCONFORMANCE REPORT**

Date \_\_\_\_\_

Page\_\_of \_\_\_\_

<b>ITEM NO</b>	<b>NONCONFORMANCE</b>	<b>COMMENTS</b>

**The non-compliance noted above must be resolved within 30 days of reporting. Please sign and return this report verifying that corrective action has been taken to resolve the non-compliance identified, and where required, to preclude recurrence.**

Corrective Action Completed by: \_\_\_\_\_

Date: \_\_\_\_\_

Corrective action:

Verified by \_\_\_\_\_ Date: \_\_\_\_\_

Confirmed by \_\_\_\_\_ Date: \_\_\_\_\_

## MAN-4018 Revision History

Revision	Revision Date	Revision history	Revised by
00	2012/03/02	New release	Ed Hurd
01	2017/04/25	Revised Section 5 (I) Personnel Qualifications. Added sample manual to appendix. Updated broken links.	Ed Hurd
02	2017/10/12	Updated BC Safety Authority name to Technical Safety BC	Larry Malmgren

## Approval

This document has been approved for adequacy by:

Tony Scholl

*Safety Manager, Boilers and Pressure Vessels*

Oct 12, 2017