



**BOILERS AND PRESSURE
VESSELS SAFETY DIVISION**

**December 1, 1999
Rev. 2**

**ACCREDITATION OF
OWNER/USER SELF-INSPECTION REPAIR PROGRAM**

Administrative Requirements

Organizations shall be accredited by TSSA *to perform repairs without the acceptance of a TSSA Inspector* pursuant to the provisions set forth below.

1. SCOPE OF ACCREDITATION

- (a) The TSSA Certificate of Authorization shall identify the location for which accreditation is granted to permit specified repairs without the presence and acceptance of the TSSA Inspector *or the insurer*. *No self-inspections of alterations or additions to existing piping systems are permitted under this Scope.*
- (b) *Certificates of Authorization* are issued for a 3 year period. TSSA may, at its discretion, limit or extend the scope of repairs.
- (c) TSSA may audit the Program at any time during the period for which a Certificate is in force. Any associated costs for the audit shall be paid by the Certificate Holder.
- (d) TSSA may, at any time, make regulations concerning the issuance and use of TSSA certificates as it deems appropriate, and all regulations shall become binding upon the holder of TSSA certificates.

2. PREREQUISITES FOR ACCREDITATION

Before an *applicant* can qualify to perform specified repairs without the presence and acceptance of the TSSA Inspector, *or the insurer*, the organization shall:

- (a) Demonstrate that it operates 24 hours a day for 7 days a week.
- (b) Own and operate pressure retaining items *regulated under the Boilers & Pressure Vessels Act*.
- (c) *Have a documented Quality Program* that supports *the repair* and inspection process.
- (d) Employ inspection staff able to demonstrate a knowledge of the applicable Codes and Standards, welding and repair practises and NDE procedures.
- (e) Meet the requirements of the Boilers & Pressure Vessels Act and Regulations.
- (f) Have its inspection program and facilities reviewed by TSSA.
- (g) *Have an organizational structure and inspection program that supports the repair process.*
- (h) Have a current edition of the *National Board Inspection Code (NBIC), CSA B51, and the referenced ASME Codes.*

3. PROCEDURE FOR OBTAINING OR RENEWING A TSSA CERTIFICATE OF AUTHORIZATION

- (a) Prior to issuance or renewal of a TSSA owner/user Certificate of Authorization, the organization and its facilities are subject to a review of its *Quality Program*. The implementation of the *Quality Program* must be satisfactorily demonstrated by the organization. TSSA reserves the right to cancel, refuse to issue, or renew the Certificate.
- (b) Applicants desiring to obtain a TSSA Certificate of Authorization shall submit a written application to the Chief Inspector, along with a copy of the Q.C. Manual and a completed checklist (see attached).
- (c) The review shall be conducted by TSSA *audit personnel* and the Authorized Inspector.
- (d) The review team shall conduct an evaluation of the organization's *Quality Program*. The organization shall demonstrate sufficient implementation of the *Quality Program* to provide evidence of the organization's knowledge of welding, non-destructive examination, postweld heat treatment, and other activities performed using current work, a demonstration mock-up, or a combination of both.
- (e) *A recommendation to issue, renew or withhold the TSSA Certificate of Authorization shall be included in a Review Report. The completed report shall be forwarded to the Chief Inspector, TSSA.*
- (f) If proper administrative fees are paid, *and all other requirements are met*, a Certificate of Authorization will be issued. The Certificate will expire on the triennial anniversary date.
- (g) TSSA may audit the *Quality Program* and the activities of the *Certificate Holder* annually, or at any frequency determined by the Chief Inspector. *The fees for such audits shall be charged to the Certificate Holder.*

4. QUALITY SYSTEM

The following is a guide to some of the features of a *Quality Program* that shall be included in the organization's *Quality Program Manual*. *Each applicant should address the features as needed for the scope of work to be performed.*

(a) *Title Page*

The name and complete address of the company to which the TSSA Certificate of Authorization is issued shall be included on the Title Page of the *Quality Program Manual*.

(b) *Contents Page*

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

(c) ***Scope of Work***

The Manual shall clearly indicate the scope and type of repairs that the *applicant* is capable of and intends to *perform on pressure retaining items owned or operated by the organization*. *The locations where the repairs are to be performed shall be identified.*

Appendix 6 of the NBIC provides guidelines for determining the scope of repairs *permitted under the certification.*

(d) ***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) The title of the individual who will be responsible to maintain and implement the program.
- (2) A statement that, if there is internal disagreement in the implementation of the Quality System, the matter is to be referred for resolution to a higher authority in the company.
- (3) A statement that all repairs carried out by the organization shall meet the requirements of the Ontario Boilers & Pressure Vessels Act, TSSA and the applicable sections of the National Board Inspection Code.

(e) ***Manual Control***

The Manual shall include the necessary provisions for revising and issuing documents to maintain the Manual current. The title of the individual authorized to approve revisions shall be included in the Manual. Revisions must be accepted and signed by TSSA prior to issuance of the Manual and implementation.

(f) ***Organization***

- (i) An organizational chart *or description of the organizational structure* shall be included in the Manual. *The line authority of the company's inspection organization shall be independent of those responsible for the execution of the repair program work.*
- (ii) The Manual shall identify those individuals responsible for preparation, implementation, or verification of the Quality Program. The responsibilities shall be clearly defined and the individuals shall have the organizational freedom and authority to fulfill those responsibilities.

(g) ***Drawings, Designs and Specifications***

The Manual shall contain controls to ensure that all design information, applicable drawings, calculations, specifications and instructions are prepared or obtained, controlled and interpreted in accordance with the original Code of Construction.

(h) ***Repair Methods***

The Manual shall include controls for repairs, including the selection of the welding procedure specification, materials, non-destructive examination methods, preheat and postweld heat treatment. The Manual shall describe the methods for performing and documenting repairs in sufficient detail to determine at what stages specific inspections are to be performed.

(i) ***Materials***

The Manual shall describe the method used to assure that only acceptable materials (including welding material) are used for repairs. The Manual shall include a description of how existing material is identified and new material is ordered, received, 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.

(j) ***Method of Performing Work***

The Manual shall describe the methods for performing and documenting repairs in sufficient detail to permit the Certificate Holder's inspection staff to determine at what stages specific inspections are to be performed.

(k) ***Welding***

The Manual shall describe suitable controls for welding. The Manual is to indicate the title of the individual(s) responsible for the welding procedure specification and its qualification, and the qualification of welders and welding operators *or brazers and brazing operators*. It is essential that only welding/*brazing* procedure specifications and welders or welding operators *and brazers or brazing operators registered with TSSA* are used in the repair of pressure retaining items.

Welders or welding operators *and brazers or brazing operators* shall maintain their qualification(s) by annual tests, in accordance with the requirements of ASME Section IX.

(l) ***Non-Destructive Examination***

The Manual shall describe suitable controls for non-destructive examinations. Provisions shall exist to ensure that NDE personnel are qualified in accordance with the applicable CGSB requirements and that NDE procedures are performed in accordance with written procedures. All reports and RT films shall be retained for review by TSSA.

(m) ***Heat Treatment***

The Manual shall describe controls to assure that all heat treatment is carried out in accordance with the applicable Code of Construction. Measures shall be established to assure proper placement of thermocouples and the use of charts. All reports shall be retained and filed for review by TSSA.

(n) ***Examinations and Tests***

- (i) reference shall be made in the Manual for examinations required upon completion of a repair;
- (ii) a description shall be provided in the Manual for the performance of pressure tests upon completion of the repair.

(o) ***Calibration***

The Manual shall describe a system for the calibration of examination, measuring, and test equipment used in the performance of repairs, including the appropriate documentation and records.

(p) ***Repair Inspections***

The Manual shall make provisions for the organization's inspector to authorize a repair prior to starting. He/she shall have access to all drawings, design calculations, specifications, procedures, process sheets, repair procedures, test results, and other documents as necessary. It shall also describe who has the responsibility for preparing and certifying the *TSSA Owner/User Repair Report*.

(q) ***Non-Conforming Items***

There shall be a system for correction of non-conformities. A non-conformity is any condition which does not comply with the applicable rules of the Construction Code, jurisdictional requirements or the *Quality Program*. Non-conformities must be corrected or eliminated before the repaired component can be considered in compliance with the *Quality Control Program*.

(r) ***Training and Qualification of Personnel***

The *Certificate Holder* shall establish a documented in-house training program. The program shall establish training objectives and provide methods of evaluating training effectiveness. As a minimum, training objectives for knowledge level shall include:

- (i) *CSA B51*, applicable ASME Code and NBIC requirements;
- (ii) responsibilities within the *Quality Program*;
- (iii) knowledge of the technical aspects and mechanical skills for the applicable position.

The following qualifications may be used, if desired, as proof of compliance with (iii) above:

- (a) *A valid API 510 Authorized Inspector Certificate for repair work within the petrochemical industry.*
- (b) *A valid National Board Owner/User Commission for repair work in all other industries.*

(s) Reporting

A description of the process used by the Certificate Holder's inspector to take necessary action if an unsafe condition is encountered, and to resolve conflicts by referring to a higher authority of the organization in accordance with 4 (d) 2 shall be included.

(t) Control of Contracted Services

A description of the process for contracting and control of services such as NDE, welding etc., if applicable.

(u) Records

Each boiler, pressure vessel or pressure piping repair shall be documented on a Repair Report, under the Certificate Holder's letterhead, in a format identical to that shown in Appendix 1. Reports shall be made available for audit at any time by TSSA. Each report shall be sequentially numbered with no gaps in numbering.

Each Repair Report shall include any manufacturer's partial data reports for boilers, pressure vessels or piping, securely attached.

The Manual shall indicate the title of the individuals responsible for preparing, signing, distributing and maintaining Repair Report forms.

All Repair Reports shall be retained by the Certificate Holder for audit by TSSA. These records shall be maintained for the lifetime of the system, boiler or pressure vessel.

(v) 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 shall be completed and identified as examples.

A sample of a completed Repair Report shall be included, showing the company name.

ADD COMPANY LETTERHEAD IN THIS SPACE

APPENDIX 1

O.I.N. 5.

**OWNER/USER
SELF-INSPECTION REPAIR REPORT**

Report #

Note: This report shall be completed and signed by the person responsible, in whole or in part, for the repair of the item and kept on file for audit by TSSA

1. Work done by: _____

2. Owner: _____

3. Location of Installation: _____

4. Unit Description: _____ Manufacturer Name: _____

5. Serial No: _____ National Board No.: _____ CRN No.: _____ Year built: _____

6. Maximum Allowable Shell or *Piping System* Pressure: _____ psi at a temperature of _____ °F

Maximum Allowable *Vessel Tube* or Jacket Pressure: _____ psi at a temperature of _____ °F

7. ASME Code Section: _____ NBIC Edition & Addenda: _____ Htg. Surface: _____ sq.ft.

Piping or Shell Diameter or Width: _____ ins. X Length: _____ ins. Safety Valve Setting: _____ psi

Repair Materials used: (size, specification, grade) _____

8. Description of Defects: _____

9. Description of Repair (Draw sketch on back page) _____

O.I.N. 5.

OWNER/USER SELF-INSPECTION REPAIR REPORT
(Back)

Report No.

9. (cont.) Sketch showing repair defects

10. Radiography: _____

11. Other N.D.E.: _____

12. Postweld Heat Treatment: _____

13. Hydrostatic Test Pressure *for Piping System* or Shell: _____ psi Vessel Tubes or Jacket: _____ psi

14. Welding Procedure(s) Provincial registration No.(s): _____

15. Welders [Name(s)]: _____ Symbols: _____

Remarks: Attached are Manufacturer's Partial Data Reports properly identified and signed by Authorized inspectors for the following items of this report:

OWNER/USER CERTIFICATION

I _____ the undersigned certify that the statements made in this report are correct and accurate and that all design, material, construction, inspection and workmanship on this unit conforms to the requirements of Ontario's Boilers and Pressure Vessels Act, Regulations, CSA-B51 Code and all other applicable Codes and/or Standards.

TSSA Certificate of Authorization No: _____ Expires on: _____

Signature: _____ Title: _____ Date: _____

Owner/User Name: _____

Owner/User Address: _____