



# Implementation Guideline for Companies requesting TSSA Certificate(s) of Authorization for the Shop Fabrication, Field Installation, Repairs, Alterations and Erection of Piping Systems

---

## 1. SCOPE:

This guideline defines the requirements to be followed when applying for Certificate(s) of Authorization with the Technical Standards and Safety Authority (TSSA) for the shop fabrication, field installation, repairs, and erection of piping systems in accordance with CSA B51, CSA B52, ASME B31.1, ASME B31.3, ASME B31.5 and CSA Z7396.1 (as applicable).

This guideline also defines the requirements to be followed when applying for a Certificate of Authorization with the TSSA for the shop fabrication, field installation, repairs, and erection of piping systems in accordance with ASME Section I, and ASME B31.1 for Boiler External Piping.

## 2. ABBREVIATIONS:

<b>AIA</b>	Authorized Inspection Agency
<b>AI</b>	Authorized Inspector
<b>ASME</b>	American Society of Mechanical Engineers
<b>CSA</b>	Canadian Standards Association
<b>TSSA</b>	Technical Standards and Safety Authority
<b>MCAO*</b>	Mechanical Contractors Association of Ontario
<b>HRAI*</b>	Heating, Refrigeration and Air Conditioning institute of Canada
<b>ORAC*</b>	Ontario Refrigeration and Air Conditioning Contractors Association

\*MCAO, HRAI and ORAC are Trade Organizations in Ontario. BPV Member Organization companies may utilize registered welding and/or brazing procedures for use in the Quality Program as set out in their agreement with the applicable Trade Organization. The use of these procedures and controls are required to be addressed in the Quality Program Manual.

## 3. AUTHORIZED INSPECTION AGENCY (AIA):

The Authorized Inspection Agency in Ontario for new piping installations, repairs and alterations to pressure equipment is the TSSA.

## 4. REFERENCED DOCUMENTS:

- TSSA Safety Information Bulletin: SB02-02 Rev. 2 *Requirements for Manufacturers and Installers of Pressure Piping Parts and Systems*
- Quality Program Manual Checklist: *Certification of Pressure Piping System Fabricators, Installers, Repairers and Alterers*

## 5. APPLICATION FOR NON-NUCLEAR ONTARIO CERTIFICATE OF AUTHORIZATION:

The Company shall complete the *Application for Non-Nuclear Ontario Certificate of Authorization*. The Company shall submit the application with the required deposit\* as indicated on the application.



The Company shall indicate if there are additional manufacturing locations. When the application is received by the TSSA, the BPV Administrative Assistant will contact the Company and forward the Quality Program Checklist and audit instructions.

\*If the applying Company is a Trade Organization Member, utilizing the Trade Organization Quality Program, check off the applicable box on the application form and submit with the reduced Trade Organization fee. Please note that proof of membership with the Trade Organization's BPV Program is required to be sent with the application.

## 6. SCHEDULING THE AUDIT:

The TSSA BPV Administrative Assistant will schedule a mutually agreeable time and location with the Company for the audit. The Company is required to submit a copy of the completed Quality Program Manual and Quality Program Checklist to the TSSA BPV Administrative Assistant prior to the audit.

When the audit has been scheduled, the Company shall adhere to the scheduled time and date. Careful attention should be noted, as cancelling the audit less than fifteen (15) working days to the mutually agreed date may result in cancellation charges (see the *Application for Non-Nuclear Ontario Certificate of Authorization* notes).

## 7. THE QUALITY PROGRAM AND THE QUALITY MANUAL:

The Company shall implement a Quality Program and document it in a Quality Program Manual\* as required by the TSSA Safety Information Bulletin: SB02-02 Rev. 2 that describes how the Company will control the processes as outlined in the Quality Program Manual Checklist.

The Company shall address all the elements as detailed in the Quality Program Manual Checklist. The Company shall appoint personnel to fulfil the requirements of the Quality Program.

\*Trade Organizations may provide a manual to their clients for use. It is up to the Company requesting the Certificate(s) of Authorization to ensure that all requirements of the Quality Program Checklist are addressed in the manual.

## 8. CODE BOOKS:

The Company shall maintain a copy of, or have direct access to the latest Edition of the following applicable Code books\*:

- CSA B51 *Boiler, Pressure Vessel and Pressure Piping Code*
- CSA B52 *Mechanical Refrigeration Code*
- CSA Z7396.1 *Medical Gas Pipeline Systems Part 1*
- ASME B31.1 *Power Piping Code*
- ASME B31.3 *Process Piping Code*
- ASME B31.5 *Refrigeration Piping and Heat Transfer Components*
- Any other supporting Codes as applicable

\*Contact the auditor if assistance is needed to determine the required Code books.



**9. WELDING AND BRAZING** (When applicable to the Quality Program):

Welding and Brazing Procedures

The Company shall have the applicable Welding and/or Brazing Procedure(s) registered with the TSSA to complete the work they are requesting to perform in accordance with the applicable Code of Construction and ASME Section IX.

Welders/Welding Operators and Brazers/Brazing Operators

The Company shall have Welding and/or Brazing Personnel qualified in accordance with the registered procedure.

**10. NON-DESTRUCTIVE EXAMINATION (NDE) OF WELDS** (When applicable to the Quality Program):

NDE includes (as applicable):

- Radiographic Examination
- Ultrasonic Examination
- Liquid Penetrant Examination
- Magnetic Particle Examination
- Visual Examination\*

The Company shall determine what NDE is required in their Quality Program. This is based on the Code design for new construction or the original Code of Construction requirements. If NDE is required, the Company is required to perform or sub-contract this examination. The controls shall be described in the Quality Manual.

\*Certification of visual examination personnel may be qualified in accordance with:

- ASME B31.1, Chapter VI, Paragraph 136
- ASME B31.3, Chapter VI, Paragraph 341
- AWS QC1
- CSA 178.2 Level 1

**11. AUDIT DEMONSTRATION ITEM:**

The Company shall demonstrate the Quality Program to the TSSA Quality Assessment Specialist. Prior to the audit, the Company shall prepare a demonstration mock-up that will demonstrate the Company's ability to perform work in accordance with their Quality Program.

The demonstration shall be a mock job or may be an actual job if agreed upon between the TSSA Quality Assessment Specialist and the Company. The demonstration mock-up will be reviewed at the time of the audit by the TSSA Quality Assessment Specialist.

When using a demonstration mock-up, the local TSSA AI need not be involved (unless the Company is applying for Boiler External Piping per ASME Section I). Registration of the piping mock-up does not require registration with the TSSA.

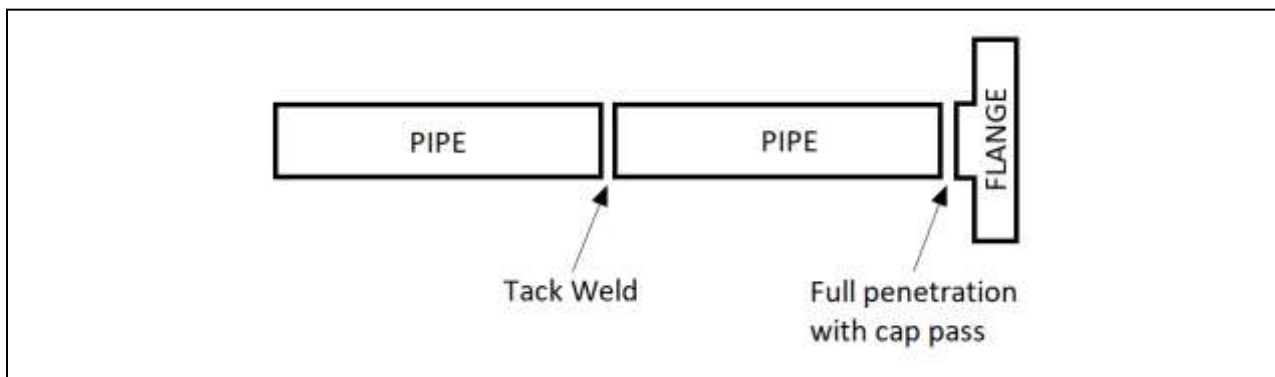
The demonstration mock-up does not need to be exactly as shown in the samples below. The Company may provide a different arrangement or item. This is acceptable considering the demonstration mock-up is adequate to demonstrate compliance with the Company's Quality Program.

**Special Note:** Only one (1) mock-up is required. For example, when the Company has both welding and brazing in their Quality Program, the Company does not need to provide both a welded and brazed mock-up. If a Company has both welding and brazing in their Quality Program, ***a welded mock-up is required as a minimum.***

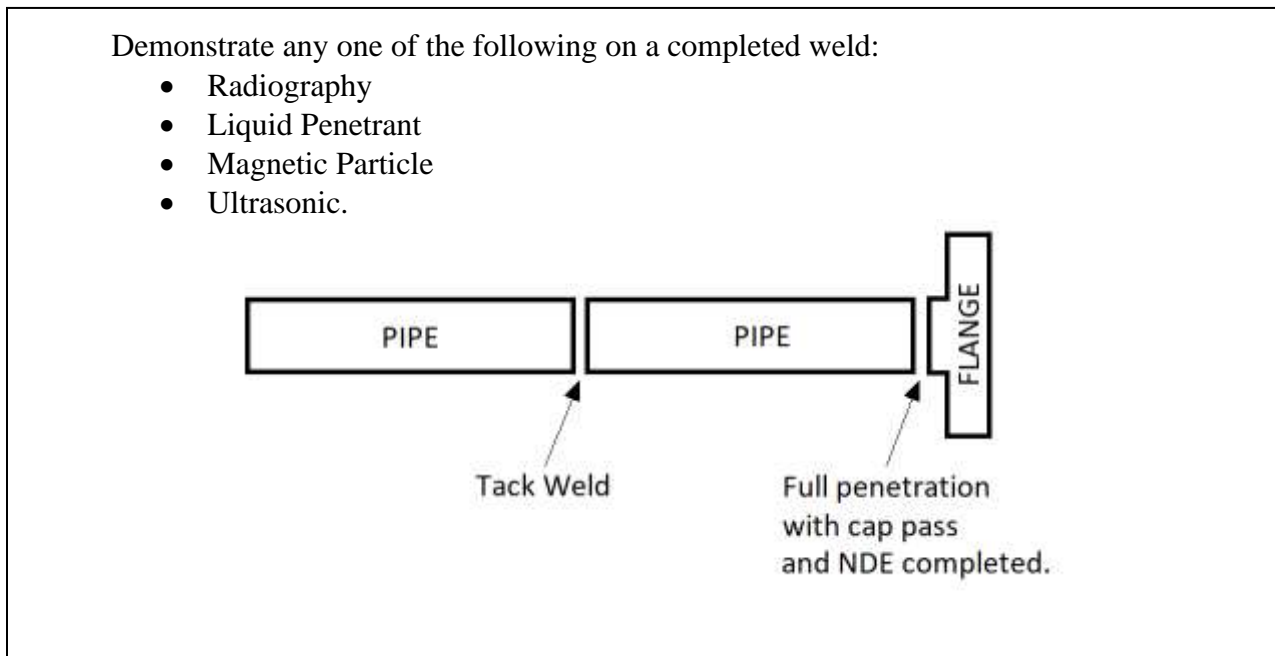
## 12. DEMONSTRATION MOCK-UP EXAMPLES:

Contents of the demonstration document package shall be per the Company's Quality Manual.

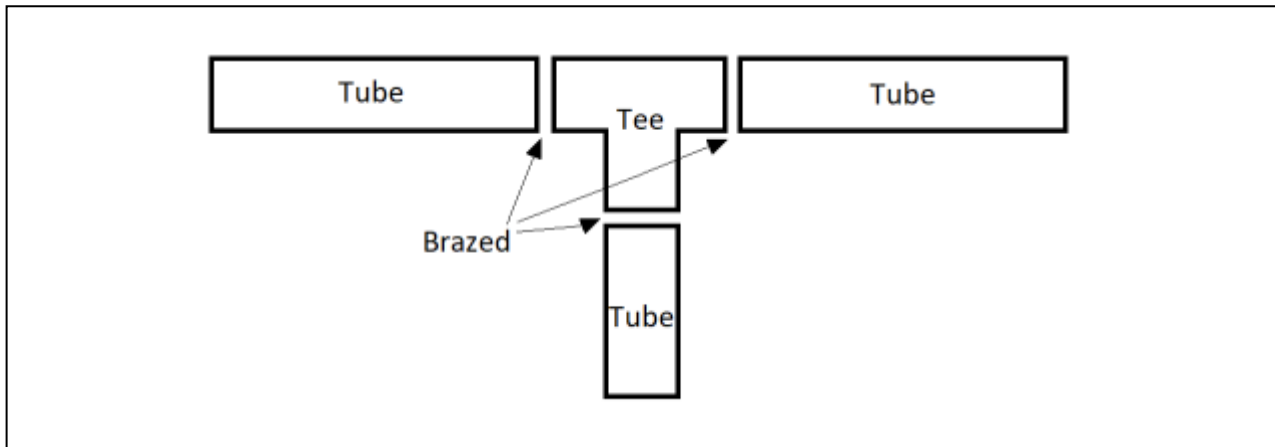
### a. Demonstration mock-up with welding in the Quality Program:



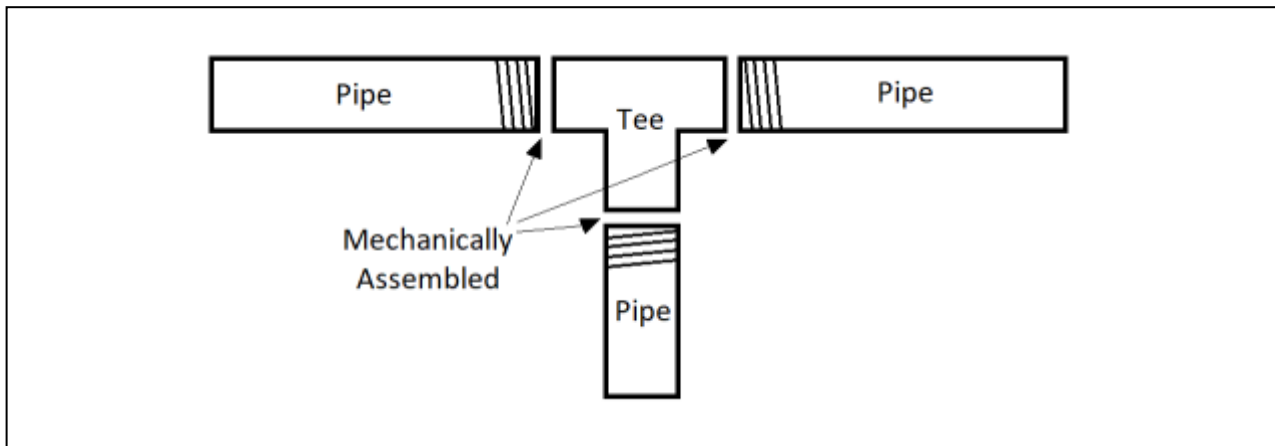
### b. Demonstration mock-up with welding and NDE in the Quality Program.



c. Demonstration mock-up with brazing in the Quality Program:



d. Demonstration mock-up with NO welding or brazing in the Quality Program:



**13. RENEWAL OF CERTIFICATE(S) OF AUTHORIZATION:**

Certificate(s) of Authorization expire every three (3) years. The Company will receive a renewal notification by the TSSA BPV Administrative Assistant approximately six (6) months prior to the expiry of the current certificate(s). If a renewal package has not been received by the Company three (3) months prior to the expiration date, the Company shall contact the BPV Administrative Assistant for guidance.