Technical Standards and Safety Authority
345 Carlingview Drive
Toronto, Ontario, M9W 6N9
www.tssa.org

Brazer/Brazing Operator Certificate

Technical Standards and Safety Act
Boilers and Pressure Vessels Regulation

No.

Brazer Last Name:	First Name:	Signature:	Stamp/ID No.:
Date Coupon Brazed:	Provincial Reg. No.:	Company PQR No.:	Company BPS No.:
Employer Name and Address:			

Testing Variables and Ranges Qualified:		
Material specification of first test coupon base metal:		
Material specification of second test coupon base metal:		
Brazing Variables:	**Actual Values:**	**Range Qualified:**
Brazing process(es) (QB-401)		
Type of brazing (manual, semi-automatic, automatic, machine) (QB-351)		
Torch brazing: manual, machine, or semiautomatic (QB-410)		
Base metal P-Number to P-Number (QB-402)		
AWS BM No. to AWS BM No. (QB-402)		
☐ Plate ☐ Pipe/Tube (enter diameter if pipe/tube)		
First base metal thickness [in(mm)] (QB-402)		
To second base metal thickness [in(mm)] (QB-402)		
Joint type (butt, lap, scarf, socket, etc.) (QB-408)		
If lap or socket, overlap length [in(mm)] (QB-408)		
Joint clearance [(in(mm)] (QB-408)		
Filler metal (SFA) specification(s) (info. only)		
Filler metal classification(s) (info. only)		
Filler metal / F-Number (QB-403)		
Filler metal product form (QB-403)		
Filler metal preplaced, mechanically fed, or manual (QB-403)		
First brazing flow position (QB-407)		
Second brazing flow position (QB-407)		

TESTING AND RESULTS

Visual Examination of Completed Joint (QB-141.6): _____

Mechanical Test: ☐ Peel (QB-462.3) ☐ Section (QB-462.4) ☐ Tension (QB-462.1)
☐ Transverse Bends [QB-462.2(a)] ☐ Longitudinal Bends [QB-462.2(b)]

Position	Result	Position	Result	Position	Result

Brazing supervised by (print name): _____ Company: _____

Mechanical tests conducted by (print name): _____ Company.: _____

Specimens evaluated by (print name): _____ Company: _____

Laboratory Test No.: _____

We certify that the statements in this record are correct and that the test coupons were prepared, brazed, and tested in accordance with the requirements of Section IX of the ASME Boiler and Pressure Vessel Code. When there is a specific reason to question the brazer's or brazing operator's ability, this Certificate may be revoked per Section IX, QW-322.1(b) of the ASME Boiler and Pressure Vessel Code.

Company: _____

Certified by (print name): _____ Signature: _____ Date: _____

FOR TSSA INSPECTOR USE ONLY

The Brazer named above has passed the brazing test required under Ontario's Technical Standards and Safety Act, Boilers and Pressure Vessels Regulation and is hereby authorized, subject to the limitation of this certificate.

Check the applicable box below:

☐ To braze for the Employer named above only.
☐ For seeking employment only.

This Certificate expires: _____ (dd/mm/yyyy)

_____ Inspector Name and Number (print)

_____ Inspector Signature and Date

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Guideline
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Brazer/Brazing Operator Certificate

Technical Standards and Safety Act
Boilers and Pressure Vessels Regulation **No.** (1)

Brazer Last Name: (2) First Name:		Signature: (3)	Stamp/ID No.: (4)
Date Coupon Brazed: (5)	Provincial Reg. No.: (6)	Company PQR No.: (7)	Company BPS No.: (8)
Employer Name and Address: (9)			

Testing Variables and Ranges Qualified:		
Material specification of first test coupon base metal:	(10)	
Material specification of second test coupon base metal:	(11)	
Brazing Variables:	**Actual Values:**	**Range Qualified:**
Brazing process(es) (QB-401)	(12)	(13)
Type of brazing (manual, semi-automatic, automatic, machine) (QB-351)	(14)	(15)
Torch brazing: manual or mechanical (QB-410)	(16)	(17)
Base metal P-Number to P-Number (QB-402)	(18)	(19)
AWS BM No. to AWS BM No. (QB-408)	(20)	(21)
Plate Pipe/Tube (enter diameter if pipe/tube) (22)	(23)	(24)
First base metal thickness (in.) (QB-402)	(25)	(26)
To second base metal thickness (in.) (QB-402)	(27)	(28)
Joint type (butt, lap, scarf, socket, etc.) (QB-408)	(29)	(30)
If lap or socket, overlap length (in.) (QB-408)	(31)	(32)
Joint clearance (in.) (QB-408)	(33)	(34)
Filler metal (SFA) specification(s) (info. only)	(35)	
Filler metal classification(s) (info. only)	(36)	
Filler metal / F-Number (QB-403)	(37)	(38)
Filler metal product form (QB-403)	(39)	(40)
First brazing flow position (QB-407)	(41)	(42)
Second brazing flow position (QB-407)	(43)	(44)

TESTING AND RESULTS

Visual Examination of Completed Joint (QB-141.6): (45)

(46) **Mechanical Test:** Peel (QB-462.3) Section (QB-462.4) Tension (QB-462.1)
Transverse Bends [QB-462.2(a)] Longitudinal Bends [QB-462.2(b)]

Position	Result	Position	Result	Position	Result
(47)	(48)				

Brazing supervised by (print name): (49) Company: (50)
Mechanical tests conducted by (print name): (51) Company.: (52)
Specimens evaluated by (print name): (53) Company: (54)
Laboratory Test No.: (55)

We certify that the statements in this record are correct and that the test coupons were prepared, brazed, and tested in accordance with the requirements of Section IX of the ASME Boiler and Pressure Vessel Code. When there is a specific reason to question the brazer's or brazing operator's ability, this Certificate may be revoked per Section IX, QW-322.1(b) of the ASME Boiler and Pressure Vessel Code.

Company: (56)
Certified by: (57) Signature: (58) Date: (59)

FOR TSSA INSPECTOR USE ONLY

The Brazer named above has passed the brazing test required under Ontario's Technical Standards and Safety Act, Boilers and Pressure Vessels Regulation and is hereby authorized, subject to the limitation of this certificate.

Check the applicable box below:

(60) To braze for the Employer named above only.
For seeking employment only.

This Certificate expires: (61) (dd/mm/yyyy)

(62) Inspector Name and Number (print)

(63) Inspector Signature and Date

PV 09398 (02/26/21)

*Information provided in this application is releasable under the Freedom of Information and Privacy Protection Act and may be disclosed upon request.

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Guideline for completing the Brazer/Brazing Operator Certificate

NOTE: This is a general guideline. The examples stated are for information purposes only. Please refer to ASME Section IX for Code requirements and actual ranges qualified. All Code paragraphs or tables referenced are specific to ASME Section IX unless otherwise noted. State "N/A" for any item that does not apply to the coupon brazed.

Item #	Description	Example
1	This unique certificate number will be provided by the TSSA Authorized Inspector.	0123456
2	Record the brazer's Last Name and First Name.	Smith, John
3	The signature of the brazer.	
4	A unique identification number shall be provided to the brazer. This number is used to identify brazes made by the brazer on the part or braze map per QB-301.3 and QG-106.2(f).	John Smith: *JS, 01, Smith,* etc.
5	Provide the date the coupon was brazed.	Jan.1, 2020
6	Provide the Provincial Registration Number of the Procedure Qualification Record used for the brazed coupon.	BP-12345.5
7	Provide the Procedure Qualification Record Number used for brazing the coupon.	PQR #1
8	Provide the Brazing Procedure Specification Number used for brazing the coupon.	BPS #1
9	Record employer name and address (if applicable).	
10	Record the material specification of the first test coupon base metal.	ASTM B280, ASTM B819, etc.
11	Record the material specification of the second test coupon base metal.	ASTM B75, ASME B16.22, etc.
12	Record the brazing process per QB-401.1 and QB-351.	Torch Brazing
13	Record the range qualified for the brazing process per QB-351.	Torch Brazing Only
14	Record the type of brazing performed per QB-351.1.	Manual
15	Record the range qualified for the type of brazing performed per QB-351.1 and QB-351.2.	Manual Only
16	Record the type of torch brazing: manual or mechanical per QB-410.5.	Manual, N/A, etc.
17	Record the range qualified for the type of torch brazing per QB-410.5.	Manual only
18	Record the base metal P-Number to P-Number per QB-402.	P-No. 300 to P-No.300
19	Record the range qualified of the P-Number(s) used per QB-402.	P-No.300 to P-No.300
20	Record the AWS BM Number to AWS BM Number per QB-406.1 (if applicable)	AWS BM No.300 to AWS BM No.300
21	Record the range qualified of the AWS BM Number(s) used per QB-406.1 (if applicable).	AWS BM No.300 to AWS BM No.300
22	Select the appropriate box to indicate whether the brazed coupon is performed on plate or pipe/tube.	Tube
23	Record the diameter of the coupon/production pipe or tube. If on plate, record thickness of the plate.	1-1/8″ OD, etc.
24	Record the range qualified for the pipe or tube as per the combination of lap length and base metal thickness per QB-408.1 and QB-402.3.	3/8" OD to 1-5/8" OD, etc.
25	Record the thickness of the first base metal per QB-402.3.	0.050″, 0.070″, etc.
26	Record the range qualified of the first base metal thickness per QB-452.	0.025″ to 0.100″, 0.035″ to 0.140″, etc.
27	Record the thickness of the second base metal per QB-402.3.	0.040″, 0.059″, etc.
28	Record the range qualified of the second base metal thickness per QB-452.	0.020″ to 0.080″, 0.030″ to 0.118″, etc.
29	Record the joint type per QB-408.1.	Lap, socket, etc.
30	Record the range qualified of the joint type per QB-408.1.	Lap only, socket only, etc.
31	Record the lap or socket overlap length per QB-408.	0.91″, etc.
32	Record the range qualified of the lap or socket overlap length per QB-408.1.	Up to 1.14″ max.

33	Record the joint clearance per QB-408.	0.002″, etc.
34	Record the range qualified of the joint clearance per QB-408.2 & QB-408.3.	0.002″ to 0.005″, etc.
35	Record the filler metal SFA specification(s).	SFA-5.8, etc.
36	Record the filler metal classification(s).	BCuP-5, etc.
37	Record the filler metal F-Number used per QB-403.	F-No. 103, etc.
38	Record the range qualified of the F-Number used per QB-403.1.	F-No. 103, etc.
39	Record the filler metal product form per QB-403.	Solid, etc.
40	Record the range qualified of the filler metal product form per QB-403.2.	Solid, etc.
41	Record the first brazing flow position per QB-407.	Vertical up, etc.
42	Record the range qualified of the first brazing flow position per QB-407.1.	Vertical up and vertical down, etc.
43	Record the second brazing flow position per QB-407.	Horizontal
44	Record the range qualified of the second brazing flow position per QB-407.1.	Horizontal
45	Record the results of the visual examination of completed braze(s) prior to cutting the test specimens per QB-141.6.	Acceptable, Satisfactory, etc.
46	Select the appropriate boxes for the testing completed on the brazed coupons per QB-462.3, QB-462.4, QB-462.1, QB-462.2(a), and QB-462.2(b).	
47	Record the position of the coupon tested.	Vertical up, etc.
48	Record the result of the coupon tested.	Acceptable, Satisfactory, etc.
49	Record the name of the individual responsible for supervising the brazing.	
50	Record the name of the company responsible for supervising the brazing.	
51	Record the name of the individual responsible for conducting the mechanical tests.	
52	Record the name of the company responsible for conducting the mechanical tests.	
53	Record the name of the individual responsible for evaluating the specimens.	
54	Record the name of the company responsible for evaluating the specimens.	
55	Record the laboratory test report number for any testing completed at a laboratory.	
56	Record the name of the company responsible for certifying the Brazer/Brazing Operator Certificate.	
57	Record the name of the individual responsible for certifying the Brazer/Brazing Operator Certificate.	
58	Signature of the individual responsible for certifying the Brazer/Brazing Operator Certificate.	
59	Record the date the Brazer/Brazing Operator Certificate was signed.	
60	To be completed by TSSA. Select the appropriate box for the Brazer/Brazing Operator to braze for the employer named on the certificate, or for the brazer seeking employment only.	
61	To be completed by TSSA. Record the expiration of the certificate (one year from the date the coupon was brazed), or state “Per ASME Section IX” (if applicable).	
62	To be completed by TSSA. Record the name and Ontario Certificate of Competency Number of the Authorized Inspector.	
63	To be completed by TSSA. Signature and date of the TSSA Authorized Inspector.	