

**CAPE MANUFACTURING LTD.**

**V-242338-6**

12 3/4" OD x 3'-0" S/S

1440PSIG @ -20°F / 100°F

1/16" C.A.

**CRN: R9415.231**

549633

FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS (Alternative Form for Single Chamber, Completely Shop or Field Fabricated Vessels Only) As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

1. Manufactured and certified by Corlac Industries Ltd, Lot 9, County Energy Park, Lloydminster, AB T9V 3A2
2. Manufactured for Stettler Oil & Gas, PO Box 652, Stettler, Alberta, T0C 2L0
3. Location of installation "Built for Stock"

4. Type: Vertical PV-1314 R9415.231 EDS-6098 Rev. 3 N/A 2006

5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction and workmanship conform to ASME Rules, Section VIII, Division 1

6. Shell: SA-106 B 0.688" 0.0625" 11-3/4" 3'-0" S/S

7. Seams: S N/A 1 N/A N/A Type 1 Spot 0.7 1

8. Heads: (a) Matl. SA-516-70N (b) Matl. SA-516-70N

Table with 10 columns: Location (Top, Bottom, Ends), Minimum Thickness, Corrosion Allowance, Crown Radius, Knuckle Radius, Elliptical Ratio, Conical Apex Angle, Hemispherical Radius, Flat Diameter, Side to Pressure (Convex or Concave)

If removable, bolts used (describe other fastenings) N/A

9. MAWP 1440 N/A psi at max. temp 100 N/A °F

Min. design metal temp. -20 °F at 1440 psi. Hydro, pneu., or comb. test pressure 2160 psi

10 Nozzles, inspection, and safety valve openings:

Table with 9 columns: Purpose (Inlet, Outlet, Drain), No., Diameter or Size, Type, Matl., Nom. Thk., Reinforcement Matl., How Attached, Location

11 Supports: Skirt Yes Lugs N/A Legs N/A Other N/A Attached Bottom, Welded

12 Remarks: Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: N/A

a) Job No. WO# 4916 c) Impact testing not req'd as per UG-20(f) 1-5 e) PSV installed by others
b) Capacity 8.9 cubic ft d) Spot RT as per UW-12(d) f) As Built Dwg No: V-004916-D101 Rev. 2
c) Inspection Openings as per UG-46(d)

CERTIFICATE OF SHOP/FIELD COMPLIANCE
We certify that the statements made in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the ASME Code for Pressure Vessels, Section VIII, Division 1. "U" Certificate of Authorization No. 30498
Expires August 26, 2007
Date MAR 17 2006 Co. Name Corlac Industries Signed [Signature] (Representative)

CERTIFICATE OF SHOP/FIELD INSPECTION
Vessel constructed by Universal Industries Corp. at Lloydminster, Alberta
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of Alberta and employed by ABSA
have inspected the component described in this Manufacturer's Data Report on MAR 17 2006, 20
and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME Code, Section VIII, Division 1. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.
Date MAR 17 2006 Signed [Signature] Commissions AB54 (Nat'l. Board (incl. endorsements), State, Prov. and No.)





the pressure equipment safety authority

BOILERS AND PRESSURE VESSELS
REPAIR OR ALTERATION REPORT

AB-40 (Side A) 2019-12

(A) #: 549633

OWNER EQUIP. NO:

REPAIR ORG. JOB NO: V-242338-6

REPAIR [ ] and/or ALTERATION [x] Partial [ ] Final [x]

1. Name of Organization doing Repair/Alteration CAPE Manufacturing Ltd.
Address LSD: 16-01-40-16-W4M Halkirk, AB. T0C 1M0, Canada AQP No. & Expiry Date AQP No.1529 & August 20, 2026
2. Name of Owner Chadwick Energy Services
Address #200, 3605 29th Street NE Calgary, AB. T1Y 5W4, Canada
Location of Installation CAPE yard LSD: 16-01-40-16-W4M Halkirk, AB. (stock)

3. Boiler/Pressure Vessel Description Vertical Scrubber CRN R9415.2
Manufacturer's Name Corlac Industries Ltd. Serial No. PV-1314

4. Original Design Conditions:
a) Vessel/Shellside/Boiler: Max Allowable Working Press. 1440 psig Min/Max Design Temp -20°F / 100°F
b) Jacket/Tubeside: Max Allowable Working Press. Min/Max Design Temp /
5. New Design Conditions:
a) Vessel/Shellside/Boiler: Max Allowable Working Press. 1440 psig Min/Max Design Temp -20°F / 100°F
b) Jacket/Tubeside: Max Allowable Working Press. Min/Max Design Temp /

6. Description of defects (location and types of deterioration that resulted in the repair/alteration).
No defects

7. Original Code Edition and Addenda ASME Sect. VIII Div.1 Year 2004 Addenda

8. Code Edition and Addenda used for performing the work ASME Sect. VIII Div.1 Year 2023 Addenda

9. Description of Work performed. (Step by step description of repair/alteration method used. Attach additional pages as required, and reference any additional documents used to provide the required information; such as repair or alteration procedures, drawings, and specifications.)
-Replace 1" TOL on top head (C7) with 2" TOL (C7R).
-Add 2" TOL to shell (C10R).
-MPI new holes in shell, head and where N/P bracket will be welded to shell.
-Add new TOL's and N/P bracket using approved welding procedures and qualified welders.
-Perform MPI on all areas that had weld added.
-Hydro scrubber to 2160 psig
-Install nameplate to bracket and have witnessed by A.I.

10. Heat Treatment: Preheat Temp 100°F Post Weld HT (Temp./Time) N/A Other

11. Non Destructive Examination (Specify type and extent).
MPI new holes in shell,head and where N/P bracket attaches to shell.
MPI new TOL's and N/P bracket after being welded to shell.

12. Pressure Test
Vessel/Shellside/Boiler Tubeside/Jacket
a) Hydrostatic 2160 psig
b) Other Test

(A) #: 549633

OWNER EQUIP. NO. \_\_\_\_\_

13. Material - List any material used in repair/alteration and any base material welded on:

Item	Material Specifications	Thickness / Schedule	Diameter	Item	Material Specifications	Thickness / Schedule	Diameter
Shell/Drums	SA-106B	0.688"	12.75" OD	Heads/ Ends	SA-516-70N	0.625"	12.75" OD
Tubesheet				Tubes			
Nozzles				Flanges/Fittings	2" NPT Threadolet SA-105N	Class 3000	2.375" ID

14. Welding Procedures – Alberta Registration Number WP- 3326.2 WPS Numbers used: Cape-4/Cape-12

15. Welded Replacement Parts: Attached are Manufacturer's Partial Data Reports or Repair/Alteration Reports properly identified and signed by Authorized Inspector for the following items of this report: (Welded parts supplied by others).

16. Responsibility Owner/Client. Identify below items that the owner/client has assumed responsibility for. Note (2)

- a) Alteration Design Submission \_\_\_\_\_ b) Repair/Alteration Procedure: \_\_\_\_\_ c) Material Control \_\_\_\_\_  
 d) Welding Control \_\_\_\_\_ e) NDE \_\_\_\_\_ f) Heat Treatment \_\_\_\_\_ g) Pressure Test \_\_\_\_\_

Note 2: Owner/client must have a valid Alberta Quality Program (AQP), for the scope of work, to assume responsibility for function c, d, e, f, or g.

17. REMARKS:

18. **CERTIFICATE OF COMPLIANCE**

We certify that the statements made in this Report are correct and that all design, material, construction and workmanship on this repair/alteration conform to the requirements of the Alberta Safety Codes Act and Regulations and the AB-513.

a) For all items except for items identified in 16:  
CAPE Manufacturing Ltd.

(Repair/Alteration Organization Name)

AQP#1529 Expires AUG.20, 2026

(AQP Number & Expiry Date)

Jason Wetter 12/19/24

(Signature & Date)

Jason Wetter

(Print Name)

b) For items identified in 16 only:

\_\_\_\_\_  
 (Owner/Client Organization Name)

\_\_\_\_\_  
 (AQP Number & Expiry Date)

\_\_\_\_\_  
 (Signature & Date)

\_\_\_\_\_  
 (Print Name)

19. DATE WORK WAS COMPLETED: 12/19/24

20. **CERTIFICATE OF INSPECTION**

I have inspected the repairs and/or alterations described in this report. To the best of my knowledge, this work has been done in accordance with the Safety Codes Act and Regulations and the requirements established in AB-513.

a) In-service Inspector (ISI) Certification  
 (When the repair is inspected by an ISI per the requirements established in AB-513)

b) ABSA Safety Codes Officer Certification  
 (When work is inspected by ABSA).

Owner-User/Inspection Company Name \_\_\_\_\_ AQP# \_\_\_\_\_

In-Service Inspector Signature & Date \_\_\_\_\_

In-Service Inspector Name (Please Print) \_\_\_\_\_

In-Service Inspector Alberta Cert # \_\_\_\_\_

12/19/24

Jason Wetter Signature & Date

Jason Wetter Print Name & Designation of Powers Number

00004401

Report Reviewed and Accepted by ABSA SCO :

\_\_\_\_\_  
 Print Name & Designation of Powers Number

\_\_\_\_\_  
 ABSA SCO Signature & Date

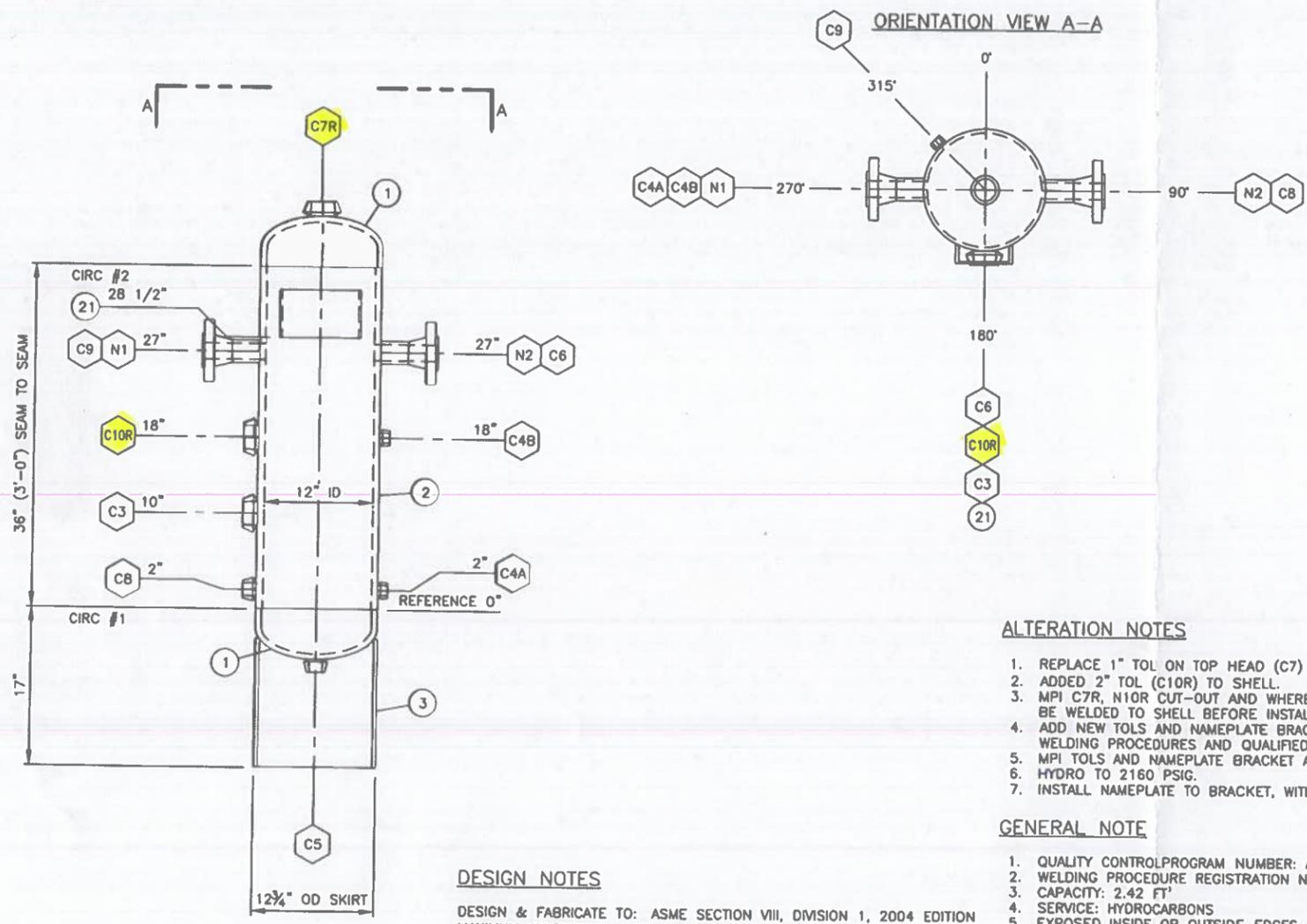
WD-5	STANDARD TOLERANCES
	FABRICATION:
	GENERAL DEVIATION: $\pm \frac{1}{8}$ "
	OVERALL LENGTH: $\pm \frac{1}{4}$ "
	ANGULAR: $\pm 1^\circ$
	WELD PREPARATION:
	LAND: $\frac{1}{8}$ " $\pm \frac{1}{32}$ "
	ROOT GAP: $\frac{1}{8}$ " $\pm \frac{1}{16}$ "
	ANGULAR: $\pm 15^\circ$
	WPS: CAPE-4
	WPS: CAPE-12

**Issued For Construction**

Issued to Fab. Manager *MC Oct 7 2024*  
 Released for Fabrication *JW Oct. 7, 2024*

**SHOP**

CONNECTION SCHEDULE												
MARK	QTY.	SIZE	SCH	CLASS & TYPE	SERVICE	MINIMUM PROJECTION		WELD SIZE			WELD DETAIL	BOM ITEM NO.
						INSIDE	OUTSIDE	A	B	C		
N1	1	2"	160	600 RFWN	INLET	-	6"	-	-	-	-	5, 7
N2	1	2"	160	600 RFWN	GAS OUTLET	-	-	-	-	-	-	5, 7
C3	1	2"	NPT	3000 TOL	LC	-	-	-	-	-	-	10
C4AB	2	3/4"	NPT	3000 TOL	LG	-	-	-	-	-	-	12
C5	1	1"	NPT	3000 TOL	DRAIN	-	-	-	-	-	-	11
C6	1	3/4"	NPT	3000 TOL	PI	-	-	-	-	-	-	12
C7R	1	2"	NPT	3000 TOL	VENT/INSPECTION	-	-	$\frac{3}{8}$ "	-	-	-	9
C8	1	1"	NPT	3000 TOL	DUMP	-	-	-	-	-	-	11
C9	1	1"	NPT	3000 TOL	RELIEF	-	-	-	-	-	-	11
C10R	1	2"	NPT	3000 TOL	LSHH	-	-	$\frac{3}{8}$ "	-	-	-	5, 13



BILL OF MATERIALS				
ITEM	QTY.	COMMENT	DESCRIPTION	MATERIAL
1	2	HEADS	PLATE - 12 3/4" OD x 3/4" THK 2:1 SE (0.625" min) W	SA-516-70N
2	1	SHELL	PIPE - 12" SCH 80 (.688") x 3'-0" LG	SA-106B
3	1	SKIRT	PIPE - 12" SCH STD (.375")	EXISTING
4				
5	2	N1-2	FLANGE - 2" CLASS 600 x SCH 160 BORE	EXISTING
6				
7	2	N1-2	PIPE - 2" SCH 160 (.344")	EXISTING
8				
9	2	C7R, C10R	THREADOLET - 2"-NPT CLASS 3000 ON 12"	SA-105N
10	1	C3	THREADOLET - 2"-NPT CLASS 3000 ON 12"	EXISTING
11	3	C5, C8-9	THREADOLET - 1"-NPT CLASS 3000 ON 12"	EXISTING
12	3	C4, C6	THREADOLET - 3/4"-NPT CLASS 3000 ON 12"	EXISTING
13				
14				
15				
16				
17				
18				
19				
20				
21	1	NAME PLATE	STANDARD NAME PLATE AND BRACKET	EXISTING
22				

**ALTERATION NOTES**

1. REPLACE 1" TOL ON TOP HEAD (C7) WITH 2" TOL (C7R).
2. ADDED 2" TOL (C10R) TO SHELL.
3. MPI C7R, N10R CUT-OUT AND WHERE NAMEPLATE BRACKET WILL BE WELDED TO SHELL BEFORE INSTALL.
4. ADD NEW TOLS AND NAMEPLATE BRACKET USING APPROVED WELDING PROCEDURES AND QUALIFIED WELDERS.
5. MPI TOLS AND NAMEPLATE BRACKET AFTER WELDING.
6. HYDRO TO 2160 PSIG.
7. INSTALL NAMEPLATE TO BRACKET, WITNESSED BY SCO.

**GENERAL NOTE**

1. QUALITY CONTROL PROGRAM NUMBER: AQP-1529
2. WELDING PROCEDURE REGISTRATION NUMBER: WP-3326.2
3. CAPACITY: 2.42 FT<sup>3</sup>
4. SERVICE: HYDROCARBONS
5. EXPOSED INSIDE OR OUTSIDE EDGES OF NOZZLES OR OPENINGS SHALL HAVE AN 1/8" MINIMUM RADIUS.
6. ALL BOLT HOLES TO STRADDLE CENTERLINES.
7. CLEAN AND COVER ALL OPENINGS FOR SHIPMENT.
8. EXTERNAL SURFACE PREPARATION: SSPC-SP3
9. EXTERNAL COATING: ONE COAT CLOVERDALE PRIMER
10. USE WELD PROCEDURE (CAPE-12) FOR ALL TACK WELDS.
11. CRN: R9415.231
12. S/N: PV-1314
13. A#: 549633

**DESIGN NOTES**

DESIGN & FABRICATE TO: ASME SECTION VIII, DIVISION 1, 2004 EDITION  
 MAXIMUM ALLOWABLE WORKING PRESSURE (MAWP): 1440 PSIG  
 DESIGN TEMPERATURE: 100°F  
 MINIMUM DESIGN METAL TEMPERATURE: -20°F AT 1440 PSIG  
 IMPACT TESTS: PER U1-A  
 RADIOGRAPHY: SPOT PER UW-11(a)5(b) (RT-2)  
 PREHEAT: 100°F  
 PWHT PER UCS-56: NO  
 HYDROSTATIC TEST PRESSURE: 2160 PSIG  
 CORROSION ALLOWANCE: 1/16"  
 WEIGHT EMPTY: 400 LBS  
 WEIGHT FULL OF WATER: 700 LBS

**CAPE MANUFACTURING LTD.**  
 BOX 216, HALKIRK, AB T0C 1M0  
 TELEPHONE: (403) 884-2442 EMAIL: SALES@CAPEMFG.COM

CLIENT: STOCK  
 DATE: 24-08-21  
 JOB NO: CML-242338  
 DRAWN BY: KG  
 CHECKED BY: *[Signature]*  
 DWG NO: VERTICAL SCRUBBER VESSEL  
 12 3/4" OD x 3'-0" s/s  
 1440 PSIG AT -20°F / 100°F  
 REV: 0

REV	DATE	REVISION	BY	APP	APP BY
0	24-10-03	ISSUED FOR CONSTRUCTION	KG	<i>[Signature]</i>	

The information contained herein is the confidential property of CAPE Manufacturing Ltd. and is not for publication. The information is issued on the understanding that no part thereof shall be copied or communicated to a third party without authorization in writing from CAPE Manufacturing Ltd.



### Repair / Alteration Inspection Checklist

Boiler/Vessel Title	Manufacturer/Serial Number	Alberta (A) No.
12 3/4" OD x 3'-0" S/S Vertical Scrubber	PV-1314	549633
AI REVIEW:		REVIEW DATE: 09/05/24

Indicate Sequence Numbers And Hold Points Which Are Applicable By

Seq.	Operations	Hold Points	Comments	Rep. Org.	ABSA AI	Owner Insp.
1	Repair/Alteration Procedure Accepted by Authorized Inspector	* *		JW 09/05/24	JW 12/19/24	
2	Welding Procedures Registered for Welding to be done	*		JW 09/05/24	JW 12/09/24	
3	Welders have valid Alberta P.Q. Card for work to be done	*		JW 09/05/24	JW 12/19/24	
4	Cracks MT/PT check after removal	*	WELD PREPS	DE 12/11/2024	JW 12/17/24	
5a	Materials to be used - checked against PO/Drawing			JW 12/09/24		
5b	- material identified with correct SA/SB specifications			JW 12/09/24		
5c	- material test reports checked against specifications			CS 12/11/2024		
6a	Fit up - shell courses-flush patches-heads					
6b	- tubesheet /shell - firetube					
6c	- nozzles and fittings			JW 12/10/24		
7	Radiographic Examination					
8	Ultrasonic Examination (MT/PT)	*		DE 12/11/2024	JW 12/19/24	
9	Internal Visual after welding	* *		JW 12/11/24	JW 12/19/24	
10	External Visual after welding	*		JW 12/11/24	JW 12/19/24	
11	Heat Treatment					
12	Hardness Tests					
13	Hydrostatic Pressure Test	* *	Gauge No.'s CAP-500G CAP-500B	JW 12/19/24	JW 12/19/24	
14	Alternative Test (Specify)					
15	Alberta Repair/Alteration Form AB-40 completed	* *		JW 12/19/24	JW 12/19/24	
16	Repair/Alteration Nameplate attached	*		JW 12/19/24	JW 12/19/24	

OUTLINE SKETCH	MATERIAL USED IN REPAIR/ALTERATION					
(Record Welders' Symbols and Heat No.'s, Radiograph ID. No.'s) Attach separate sketch if required.	Item	Mat'l Spec	Plate & Heads Heat & Plate#	Thk.	Sch.	Rating
	Shell/Patches					
	Heads/End					
	Tubesheet					
	Firetube					
	Nozzles					
	Fittings					
	Flanges					

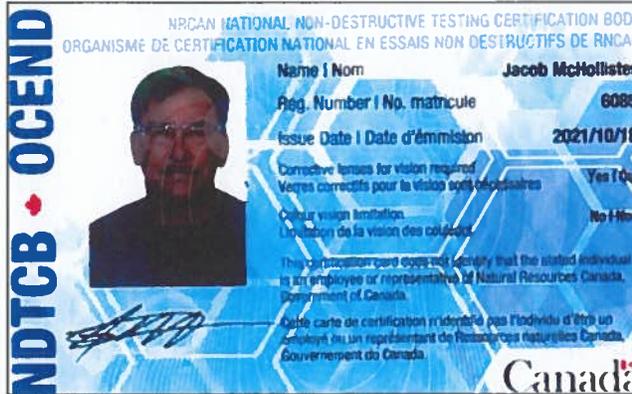


### Travel Sheet (Back) 242338V-6

MATERIAL THICKNESS VERIFICATION AND IDENTIFICATION				WPS #/ WELD I.D. / WELDER SYMBOLS / FIT-UP						
Description	Thickness	Material Spec. & Grade	Heat & Plate Identifier or I.D. Number	Weld I.D.	Welder Symbol	Fit-Up Exam.	Weld I.D.	Welder Symbol	Fit-Up Exam.	Verify Type 1 Joint
Shell #1				L -			C -			
ITEM #				L -			C -			
Shell # 2				L -			C -			
ITEM #				L -			C -			
Shell #				L -			C -			
ITEM #				L -			C -			
Head #1							C -1			
ITEM #							C -			
Head #2							C -2			
ITEM #							C -			
Boot #1 Shell							C -			
Boot #1Head							C -			
Boot #2 STUB							C -			
Boot #2Head							C -			
Consumable										

						WPS# / WELDER SYMBOLS / FIT-UP			
Mark	Mat. I.D.	Neck	Fitting	Flange	Repad or Attachment	Cat. B	Cat. C	Cat. D	Pad OD
<b>C7R</b>	Spec.-Grd.		SA-105N			Z			
VENT/ INSP.	Thk./Rating		2" TOL CL 3000			CAPE - 12			
	Heat# or ID		<b>51185</b>			<i>Handwritten mark</i>			
<b>C10R</b>	Spec.-Grd.		SA-105N			Z			
LSHH	Thk./Rating		2" TOL CL 3000			CAPE- 12			
	Heat# or ID		<b>51185</b>			<i>Handwritten mark</i>			
	Spec.-Grd.		SA-36/SS			Z			
	Thk./Rating		STANDARD NAME PLATE AND BRACKET <b>EHK</b>			CAPE- 12			
	Heat# or ID					<i>Handwritten mark</i>			
	Spec.-Grd.								
	Thk./Rating								
	Heat# or ID								
	Spec.-Grd.								
	Thk./Rating								
	Heat# or ID								
	Spec.-Grd.								
	Thk./Rating								
	Heat# or ID								
	Spec.-Grd.								
	Thk./Rating								
	Heat# or ID								

Jacob McHollister	CGSB 48.9712	Level II	RT - MT	#6085
	SNT	Level II	RT - MT - PT- HT UT Digital Thickness	#6085



**HUNT INSPECTION LTD.** **SNT CERTIFICATION #6085**

**Jacob McHollister**

has met the requirements of SNT certification in accordance with *Hunt Inspection Ltd.* written practice PQ-1 Rev. 22 that meets the requirements of ASNT recommended practice SNT-TC-1A 2020 edition, in the nondestructive testing methods listed on the reverse side of this card.

**HUNT INSPECTION LTD.** **SNT CERTIFICATION #6085**

**Technician: Jacob McHollister**

SNT Method	Level	Initial Cert. Date	Re Cert. Date	Expiry Date
RT	II	Jan. 05, 2005	Dec. 30, 2019	Dec. 29, 2024
MT	II	Jan. 18, 2005	Dec. 30, 2019	Dec. 29, 2024
PT	II	Jan. 22, 2007	Dec. 30, 2019	Dec. 29, 2024
UT-DT	II	Apr. 15, 2017	Dec. 30, 2019	Dec. 29, 2024
HT	II	Jan. 03, 2019	Dec. 30, 2019	Dec. 29, 2024

Name of Level III Examiner & Certifying Authority: Joel Norman  
Signature of Level III Examiner & Certifying Authority: 

Date of Issue: April 25, 2024

  
APR 26 2024

**NDT PERSONNEL CERTIFICATION TO THE STANDARD  
CAN/CGSB 48.9712-2022 & ASNT SNT-TC-1A 2020  
ANNUAL EYE EXAMINATION REPORT**

In accordance with the Standard CAN/CGSB 48.9712 "Non-destructive Testing – Qualification and Certification of Personnel" and ASNT recommended practice SNT-TC-1A, this Eye Examination Report, consisting of three vision requirements: Near Vision, Distance Vision, and Colour Vision for examination in any of the of NDT Methods

**APPLICANT'S NAME:** JACOB MCHOLLISTER **REGISTRATION NUMBER:** #6085

I am submitting for the following: (Please check)

EXAMINATION

RENEWAL

RE-CERTIFICATION

**NEAR VISION ACUITY:** shall permit reading of a Jaeger number 1 or equivalent letters at not less than 30.5 cm with one or both eyes, either corrected or uncorrected.

I CONFIRM THAT THE CANDIDATE:

- Meets the requirement without correction  
 Meets the requirement with correction  
 Does not meet

Dorin Hunt  
Examiners Name

  
Examiners Signature

President  
Appointment/Title

January 4, 2024  
Date of Eye Examination

**COLOUR & GRAYSCALE CONTRAST DIFFERENTIATION**

The following tests must be completed:

- (1) Colours using the HHR 4<sup>th</sup> Edition 24 tablet test for colour blindness for the NDT method(s) concerned.  
(2) Grayscale using Skerik Grey Scale test or a calibrated step tablet, density strip with a minimum of 10 steps for the NDT method(s) concerned.

I CONFIRM THAT THE CANDIDATE CAN DISTINGUISH BETWEEN THE COLOURS AND CONTRASTS OF THE ABOVE TESTS IN THE NDT METHOD(S) CONCERNED:

Dorin Hunt  
Examiners Name

  
Examiners Signature

President  
Appointment/Title

January 4, 2024  
Date of Eye Examination

  
JAN 08 2024







**Exhibit 18.2: Pressure Test Affidavit**

**CAPE MANUFACTURING LTD.**  
**PRESSURE TEST AFFIDAVIT**

ISSUED: <b>V-242338-6</b>		DATE: <b>Dec.19,2024</b>	
LOCATION	ISSUED	CAPE MANUFACTURING LTD.	
DESIGN PRESSURE 1440 psi	TEST PRESSURE REQUIRED 2160 psi	GAUGE NO'S USED: <b>Two (2)</b>	
TEST HOLD TIME REQUIRED 60 Minutes	ID NO: <b>CAP-5006</b>	RANGE: 0-5000 psi	
	ID NO: <b>CAP-5008</b>	RANGE: 0-5000 psi	
TEST MEDIUM Water		MEDIUM TEMPERATURE REQUIRED 50F	
PRESSURE INCREASE NOT TO EXCEED <b>1,000</b> kPa / MINUTE			
DESCRIPTION EQUIPMENT / SYSTEM			
- Hydro Test 1 (One) 12 3/4"OD X 3'-0" S/S Vertical Scrubber Vessel.			
NOTES:			
1. EQUIPMENT / SYSTEM TO BE INSPECTED BY <b>QUALITY CONTROL REPRESENTATIVE</b> AND AUTHORIZED INSPECTOR BEFORE HYDROSTATIC TEST.			
2. SEAL ALL NOZZLES USING BLANK FLANGES AND GASKETS - NO GREASE OR OTHER COMPOUNDS TO BE APPLIED TO GASKET SURFACE.			
3. COUPLINGS AND WELD-O-LETS ETC. TO BE PLUGGED AND TEFLON TAPE OR WHITELEAD MIXTURE MAY BE USED FOR SEALING.			
4. PROVIDE AT LEAST ONE (1) VENT OPENING AT HIGHEST POINT DURING FILLING.			
5. WATER TEMPERATURES SHOULD BE AS SPECIFIED BUT NOT LESS THAN 30F ABOVE MINIMUM DESIGN METAL TEMPERATURES OR MORE THAN 120F FOR ALLOY STEELS.			
6. MINIMUM OF TWO CALIBRATED GAUGES, INSTALLED ON THE EQUIPMENT TESTED.			
7. TEST GAUGES SHOULD SHOW CALIBRATION DATE WITHIN 12 MONTHS OF DATE OF <b>FIRST</b> USE.			
8. TEST PRESSURE SHOULD BE HELD AS SPECIFIED BEFORE VIEWING.			
CONTRACTOR		OWNER INSPECTOR	
<b>CAPE MANUFACTURING LTD.</b>			
<i>Tristan van Zandbergen</i>			
TEST COMPLETED BY	DATE: Dec.19,2024	PRINT OR TYPE NAME HERE	DATE:
<i>[Signature]</i>			
SIGN		SIGN	
<i>Jason Webster</i>		<b>AUTHORIZED INSPECTOR</b>	
QUALITY CONTROL WITNESS	DATE: Dec.19,2024	PRINT OR TYPE NAME HERE	DATE
<i>[Signature]</i>			
SIGN		SIGN	

# Certificate of Calibration

Harvie Instruments Ltd. certifies this gauge has been calibrated using measurement standards traceable to the National Research Council, the National Institute of Standards and Technology, or derived from accepted values of natural physical constants.

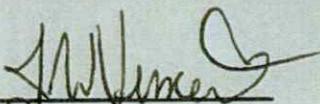
Pressure Standard #1 TB-1 Dead Weight Tester 573  
 Pressure Standard #2 TB-2

<b>Client: Cape Manufacturing Ltd.</b>	<b>Date:</b> May 8, 2024
<b>Device:</b> Wet Pressure Gauge	<b>Cal Due:</b> May 7, 2025
<b>Serial #:</b> CAP 5008	<i>FIRST USED AUG 21, 2024</i>
<b>Pressure Range:</b> 5,000 PSI	<b>Make:</b> Winters <i>DH</i>
	<b>Device Accuracy Rating</b> +/- 1.0 % of Full Span

Final Comparison Results					
Step #	% Scale	Standard PSI	Gauge PSI	Deviation PSI	% of Full Span
1	0	0	0	0.0	0
2	10	500.0	494.0	-6.0	-0.12
3	20	1,000.0	1,002.0	2.0	0.04
4	40	2,000.0	2,003.0	3.0	0.06
5	60	3,000.0	3,019.0	19.0	0.38
6	80	4,000.0	4,045.0	45.0	0.90
7	100	5,000.0	5,050.0	50.0	1.00
8	50	2,500.0	2,515.0	15.0	0.30
9	0	0	0	0.0	0.00
Maximum Deviation				50.0	1.00

**ACCEPTED AT STATED ACCURACY**

Calibrated / Certified by or under the direct supervision of:



\_\_\_\_\_  
 J. Vincent  
 Calibration Technician

<b>Remarks:</b>	Gauge was received out of accuracy. It was adjusted or repaired as required and returned to accuracy.
	Any number of factors can cause the gauge to drift out of tolerance at any time following its calibration.



6879A - 52 Ave  
 Red Deer, AB. Canada T4N 4L2

**Ph: 403-347-6001**

# Certificate of Calibration

Harvie Instruments Ltd. certifies this gauge has been calibrated using measurement standards traceable to the National Research Council, the National Institute of Standards and Technology, or derived from accepted values of natural physical constants.

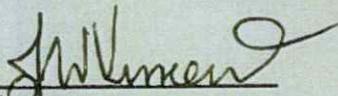
Pressure Standard #1 TB-1 Dead Weight Tester 573  
 Pressure Standard #2 TB-2

<b>Client:</b> Cape Manufacturing Ltd.	<b>Date:</b> May 8, 2024
<b>Device:</b> Wet Pressure Gauge	<b>Cal Due:</b> May 7, 2025
<b>Serial #:</b> CAP 5006	<i>FIRST USED Aug 21, 2024</i>
<b>Pressure Range:</b> 5,000 PSI	<b>Make:</b> GT <i>DH</i>
	<b>Device Accuracy Rating</b>
	+/- 1.0 % of Full Span

Final Comparison Results					
Step #	% Scale	Standard PSI	Gauge PSI	Deviation PSI	% of Full Span
1	0	0	0	0.0	0
2	10	500.0	477.0	-23.0	-0.46
3	20	1,000.0	982.0	-18.0	-0.36
4	40	2,000.0	1,980.0	-20.0	-0.40
5	60	3,000.0	2,981.0	-19.0	-0.38
6	80	4,000.0	3,978.0	-22.0	-0.44
7	100	5,000.0	4,962.0	-38.0	-0.76
8	50	2,500.0	2,480.0	-20.0	-0.40
9	0	0	0	0.0	0.00
Maximum Deviation				38.0	0.76

**ACCEPTED AT STATED ACCURACY**

Calibrated / Certified by or under the direct supervision of:

  
 \_\_\_\_\_  
 J. Vincent  
 Calibration Technician

**Remarks:**  
 Any number of factors can cause the gauge to drift out of tolerance at any time following its calibration.



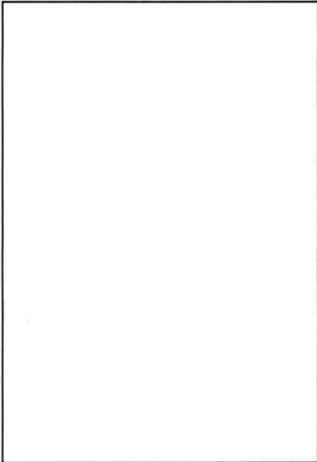
6879A - 52 Ave  
 Red Deer, AB. Canada T4N 4L2

**Ph: 403-347-6001**



## Name Plate Facsimile

\*NOTE: The "NB STAMP" and the National Board serial number shall only be marked on nameplates if the item is registered with the National Board.

* 	
	<b>ALTERED BY</b> <b>CAPE</b> <b>MANUFACTURING LTD.</b>
	<b>ALTERED DECEMBER 2024</b>
<b>YEAR BLT.</b> <input type="text" value="2006"/>	<b>SERIAL No.</b> <input type="text" value="PV-1314"/>
<b>VESSEL TYPE</b> <input 3'-0"="" od="" s="" scrubber="" type="text" value="12 3/4" vertical="" vessel"="" x=""/>	
<b>M.A.W.P</b> <input type="text" value="1440"/> <b>PSI</b>	<b>AT</b> <input type="text" value="100"/> <b>oF</b>
<b>M.D.M.T.</b> <input type="text" value="-20"/> <b>oF</b>	<b>AT</b> <input type="text" value="1440"/> <b>PSI</b>
<b>SHELL TK.</b> <input type="text" value="0.688"/> <b>IN</b>	<b>HEAD TK.</b> <input type="text" value="0.625"/> <b>IN</b>
<b>CRN</b> <input type="text" value="R9415.231"/>	<b>C.A.</b> <input type="text" value="0.0625"/> <b>IN</b>
<b>A#:</b> <input type="text"/>	
<b>CAPE JOB # V-242338-6</b>	
<b>Mailing Address: Box 216 Halkirk Alberta Canada T0C 1M0</b>	

Markings shall be produced by casting, etching, embossing, debossing, stamping or engraving and the characters must be either indented or raised at least 0.004 inches (0.10 mm). Letters and numbers must be at least 5/32" high.



ALTERED BY

ALTERED  
DECEMBER 2024



CAPE MANUFACTURING LTD.

YEAR BLT

SERIAL NO.

VESSEL TYPE

M.A.W.P.  PSI AT  °F

M.D.M.T.  °F AT  PSI

SHELL TK.  IN HEAD TK.  IN

CRN  C.A.  IN

A#

MAILING ADDRESS: BOX 216 HALKIRK ALBERTA T0C 1M0

Alberta

33404

ABSA

the pressure equipment safety authority

Grade "B" Pressure Welder's  
Certificate of Competency

This is to certify that **Cole Sutley**  
has satisfied the requirements of the Pressure Welders Regulations under  
the Safety Codes Act and is hereby issued this certificate of competency



W-75982

File no.

Dated at Edmonton  
June 16, 2023

  
Administrator

"Z"  
Stamp



### WELDER QUALIFICATION RECORD (WQR)

Welder's Name Cole Sutley ABSA File No.: W-75982 Stamp# Z  
 Identification of WPS followed by welder during welding of test coupon: CAPE-12(rev3) W.P. Reg. #WP 3326.2  
 Base material(s) welded: SA-106 GRD-B Thickness: 15.875mm X Test Coupon  Prod. Weld

#### Testing Conditions and Qualification Limits

Welding Variables (QW-350)	Actual Values		Range Qualified	
	GMAW	GMAW(MC)	GMAW	GMAW(MC)
Welding Process(es) Used:	SEMI AUTO	SEMI AUTO	SEMI AUTO	SEMI AUTO
Type of Welding (e.g., Manual, Semi-Automatic) Used:	P-1		P1-P15F,P34,P4X	
Base Metal P or S Number: To P or S Number:	64 mm		25 mm min. O.D.	
Plate <input checked="" type="checkbox"/> Tube (enter diameter if pipe or tube):	NONE	WELD METAL	With/Without	With
Backing (metal, weld metal, double-welded, etc.):	5.18	5.18		
Filler Metal or Electrode Specification(s) (SFA) (info only):	ER70S-2	ER70C-6M		
Filler Metal or Electrode Classification(s) (info only):	F6	F6 (MC)	F6	F6 (MC)
Filler Metal or Electrode F-Number (s):	N/A		N/A	
Filler Type (solid/metal or flux cored/powder) (GTAW or PAW):	N/A		N/A	
Consumable Insert for GTAW or PAW:				
Deposit Thickness for each process:				
Process 1: <b>GMAW</b> 3 Layers minimum <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	F6	2.79	F6	3.07mm
Process 2: <b>GMAW(MC)</b> 3 Layers minimum <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	F6(MC)	13.085mm	F6(MC)	MTBW
Welding Position (2G, 6G, 3F, etc.):	6G	2G	All	Flat Hor
Progression (Uphill or Downhill):	DOWNHILL	N/A	DOWNHILL	N/A
Fuel Gas for OFW, Inert Gas Backing for GTAW, PAW, GMAW:	None		With/without	With
Transfer Mode (spray/globular or pulse to short circuit-GMAW):	SHORT-CIRCUIT / Spray		SHORT-CIRCUIT/SP,G,P	
GTAW Current Type/Polarity (AC, DCEP, DCEN):	N/A		N/A	

#### Results

Visual Examination of Fit up Root Gap: 6mm Tack Welds: Bridge (Length: 10mm Number: 2 )  
 Root Pass: (Describe Discontinuity if Unacceptable): Acceptable  
 Completed Weld: (Describe defects if Unacceptable): Acceptable  
 Bend Test: Transverse Root and Face [QW-462.3(a)] Longitudinal Root and Face QW-462.3(b)  Side [QW 462.2]  
 Pipe Bend Specimen, corrosion resistant overlay [QW462.5(c)]  Plate Bend Specimen, corrosion resistant overlay [QW462.5(d)]  
 Macro Test for Fusion [QW462.5(b)]  Macro Test for Fusion [QW462.5(e)]

Type	Result	Type	Result	Type	Result
Side BEND 1	Acceptable	Side BEND 2	Acceptable		
Side BEND 3	Acceptable	Side BEND 4	Acceptable		

(For alternative qualification of groove welds by radiography to QW-191)

R.T. Results: \_\_\_\_\_ U.T Results: \_\_\_\_\_  
 Fillet Weld Fracture Test (Describe location, nature and size of any crack or tearing of specimen): N/A  
 Length and Per Cent of Defects: N/A inches N/A

#### Record Information

Film or Specimens Evaluated by: Lee Yasinski Company: Red Deer Polytechnic  
 Welding supervised by: Jim Gonda  
 Mechanical tests conducted by: Lee Yasinski Laboratory test no.: \_\_\_\_\_

We certify that the statements in this record are correct and that the test coupons were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

ACCREDITED ORGANIZATION: RED DEER POLYTECHNIC AOQP No.: 7114 Expiry Date MARCH 26 /2024  
 Certified by: \_\_\_\_\_ Examiner File No: E-00326 Date: DEC 12<sup>th</sup>,2023  
 Company Representative: Jim Gonda Examiner Lee Yasinski  
 P.Q. Card No. (When issued): 4825 Performance Test Reference No.: \_\_\_\_\_  
 Test Coupon I.D. No.: LY-2 Date Coupon is to be retained to: Jan 12<sup>th</sup>,2024



### WELDER QUALIFICATION RECORD (WQR)

Welder's Name Cole Sutley ABSA File No.: W- 75982 Stamp No.: Z  
 Identification of WPS followed by welder during welding of test coupon: CAPE-1SR(REV 1) W.P. Reg. #WP 3326.2  
 Base material(s) welded: SA 106 GRD B Thickness: 15.875mm xTest Coupon  Prod. Weld

#### Testing Conditions and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding Process(es) Used:	<b>SMAW</b>	<b>SMAW</b>
Type of Welding (e.g., Manual, Semi-Automatic) Used:	<b>MANUAL</b>	<b>MANUAL</b>
Base Metal P or S Number: To P or S Number:	<b>P-1</b>	<b>P1-P15F,P34,P4X</b>
<input type="checkbox"/> Plate <input checked="" type="checkbox"/> Tube (enter diameter if pipe or tube):	<b>64 mm</b>	<b>25 mm min O.D.</b>
Backing (metal, weld metal, double-welded, etc.):	<b>NONE WELD METAL</b>	<b>With/Without With</b>
Filler Metal or Electrode Specification(s) (SFA) (info only):	<b>SFA 5.1</b>	
Filler Metal or Electrode Classification(s) (info only):	<b>E6010 E7018</b>	
Filler Metal or Electrode F-Number (s):	<b>F3 / F4</b>	<b>F3 / F4</b>
Filler Type (solid/metal or flux cored/powder) (GTAW or PAW):	<b>N/A</b>	<b>N/A</b>
Consumable Insert for GTAW or PAW:	<b>N/A</b>	<b>N/A</b>
Deposit Thickness for each process:		
Process 1: <b>SMAW F3</b> 3 Layers minimum <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>F3 2.875 mm</b>	<b>F3 5.75mm</b>
Process 2: <b>SMAW F4</b> 3 Layers minimum <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>F4 13mm</b>	<b>F4 MTBW</b>
Welding Position (2G, 6G, 3F, etc.):	<b>6G</b>	<b>ALL</b>
Progression (Uphill or Downhill):	<b>UPHILL</b>	<b>UPHILL</b>
Fuel Gas for OFW, Inert Gas Backing for GTAW, PAW, GMAW:	<b>N/A</b>	<b>N/A</b>
Transfer Mode (spray/globular or pulse to short circuit-GMAW):	<b>N/A</b>	<b>N/A</b>
GTAW Current Type/Polarity (AC, DCEP, DCEN):	<b>N/A</b>	<b>N/A</b>

#### Results

Visual Examination of Fit up Root Gap: 3mm Tack Welds: Bridge (Length: 10mm Number: 3 )  
 Root Pass: (Describe Discontinuity if Unacceptable): Acceptable  
 Completed Weld: (Describe defects if Unacceptable): Acceptable  
 Bend Test: Transverse Root and Face [QW-462.3(a)]  Longitudinal Root and Face QW-462.3(b)]  Side [QW 462.2]  
 Pipe Bend Specimen, corrosion resistant overlay [QW462.5(c)]  Plate Bend Specimen, corrosion resistant overlay [QW462.5(d)]  
 Macro Test for Fusion [QW462.5(b)]  Macro Test for Fusion [QW462.5(e)]

Type	Result	Type	Result	Type	Result
SIDE BEND 1	<b>Acceptable</b>	SIDE BEND 2	<b>Acceptable</b>		
SIDE BEND 3	<b>Acceptable</b>	SIDE BEND 4	<b>Acceptable</b>		

For alternative qualification of groove welds by radiography to QW-191)

R.T. Results: \_\_\_\_\_ U.T Results: \_\_\_\_\_  
 Fillet Weld Fracture Test (Describe location, nature and size of any crack or tearing of specimen): N/A  
 Length and Per Cent of Defects: N/A inches N/A

#### Record Information

Film or Specimens Evaluated by: Lee Yasinski Company: Red Deer Polytechnic  
 Welding supervised by: Jim Gonda  
 Mechanical tests conducted by: Lee Yasinski Laboratory test no.: \_\_\_\_\_

We certify that the statements in this record are correct and that the test coupons were prepared, welded and tested in accordance with the requirements of Section IX of the ASME Code.

ACCREDITED ORGANIZATION: RED DEER POLYTECHNIC AOQP No.: 7114 Expiry Date MARCH 26, 2024

Certified by: Jim Gonda Examiner File No: E-00326 Date: Dec 12<sup>th</sup>, 2023  
 Company Representative: Jim Gonda Examiner Lee Yasinski  
 P.Q. Card No. (When issued:): 4105 Performance Test Reference No.: \_\_\_\_\_  
 Test Coupon I.D. No.: LY-6 Date Coupon is to be retained to: Jan 12<sup>th</sup>, 2024

**Red Deer Polytechnic**  
Box 5005, Red Deer Alberta  
T4N 5H5

7114  
A.O.Q.P.No

**WELDER PERFORMANCE QUALIFICATION CARD**

Cole Sutley **W-75982**  
[Name] [ABSA File No.]

This card is issued pursuant to the Safety Codes Act and Pressure Welder's Regulations. The performance qualification is in accordance with Section IX, A.S.M.E. Code and subject to the limitations on the reverse side.

Dec 12th, 2023  
Date of Test

[Signature]  
Signature of Welder

Lee Yasinski  
Examiner (Print/Type)

CARD **4825**

**PERFORMANCE QUALIFICATION CARD NO. 4825**

Process(es) <u>GMW GMW(ac)</u>	Materials (P. No.) <u>P1-P15F, P34, P4X</u>
Filler Metal Group (F.No.) <u>F6 F6(MC)</u>	Min. Outside Pipe Diameter <u>25mm</u>
Max Deposited Weld Metal <u>3.07mm MTBW</u>	Position(s) Qualified <u>All Flat/Vert</u>
Backing <u>with/without with</u>	Backing Gas <u>with/without</u>
Progression <u>Downhill N/A</u>	

Dec 12th, 2025 [Signature] E-00326  
P.Q. Expiry Date Weld Examiner Signature Certification No.

**Red Deer Polytechnic**  
Box 5005, Red Deer Alberta  
T4N 5H5

7114  
A.O.Q.P.No

**WELDER PERFORMANCE QUALIFICATION CARD**

Cole Sutley **W-75982**  
[Name] [ABSA File No.]

This card is issued pursuant to the Safety Codes Act and Pressure Welder's Regulations. The performance qualification is in accordance with Section IX, A.S.M.E. Code and subject to the limitations on the reverse side.

Dec 12th, 2023  
Date of Test

[Signature]  
Signature of Welder

Lee Yasinski  
Examiner (Print/Type)

CARD **4105**

**PERFORMANCE QUALIFICATION CARD NO. 4105**

Process(es) <u>SMAW SMAW</u>	Materials (P. No.) <u>P1-P15F, F34, P4X</u>
Filler Metal Group (F.No.) <u>F3 F4</u>	Min. Outside Pipe Diameter <u>25mm</u>
Max Deposited Weld Metal <u>5.75mm MTBW</u>	Position(s) Qualified <u>All</u>
Backing <u>With/Without With</u>	Backing Gas <u>N/A</u>
Progression <u>Uphill Uphill</u>	

Dec 12th, 2025 [Signature] E-00326  
P.Q. Expiry Date Weld Examiner Signature Certification No.

### TACK WELDS

Tack welds may be used on welded parts to hold edges in proper alignment until final welds are made and shall use an appropriate qualified welding procedure.

### REMOVAL

Insofar as practicable, tack welds shall be removed completely when they have completed their purpose. Removal shall be by grinding and shall completely remove tack weld material exposing sound base metal. Surfaces shall be inspected by the welder to be free from defects as to prevent inclusion of any impurities into the weld joint.

### INCORPORATION

Tack welds to be left in place shall be:

- (a) made by qualified welders to an appropriate qualified welding procedure.
- (b) made at the root of the joint with the same electrode as that used in the root pass.
- (c) completely fused with the root pass.
- (b) cleaned to sound metal and blended into surrounding metal along their entire length.
- (b) satisfactorily visually inspected by the welder before incorporation into the final weld.  
Inspection shall be over the entire length of the tack weld (including stopping and starting ends) and shall ensure full fusion, complete penetration and that it be free from defects (slag, cracks, porosity etc).

If found to be defective, tack welds shall be removed as outlined above.

### STOPS & STARTS

If welding is stopped for any reason, extra care shall be taken in restarting. The stops / starts shall be ground to secure sound metal at the base of weld metal first deposited. Edges shall be blended into surrounding metal and ends feathered to produce a continuous groove surface free from abrupt ridges, valleys or discontinuities. Welders shall inspect stops and starts before incorporation into the final weld to ensure it be free from any defects and that it allows full penetration and complete fusion to the existing stop / start.



Welder Signature

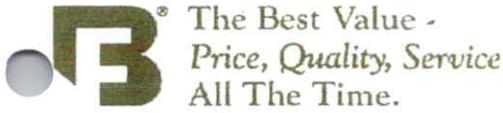
Nov 21/23

Date

# CERTIFIED MILL TEST REPORT

LOG NO. F00000000198688 Page 4 of 6

**BONNEY FORGE CORPORATION**  
P.O. BOX 330 • 14496 CROGHAN PIKE • MOUNT UNION, PA 17066-0330  
(814) 542-2545 • (800) 345-7546 • FAX (814) 542-4906  
www.bonneyforge.com



CUSTOMER:

DATE 02/23/2024

CUSTOMER ORDER NO.:

BONNEY ORDER NO. B000339882

SHIP TO:

ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO.	CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:
7551916		51185	18-12X2 3M A105N THRD T	SA/A105N ✓ C 0.200 ✓ Cb 0.012 ✓ Co 0.003 ✓ Cr 0.080 ✓ Cu 0.040 ✓ Mn 1.110 ✓ Mo 0.004 ✓ Ni 0.020 ✓ P 0.005 ✓ S 0.021 ✓ Si 0.220 ✓ V 0.004 CE(Long Formula) = 0.41 T/S(PSI) 74,278 Y/S(PSI) 50,871 EL(%) 36.60 RA(%) 57.90 Brinell Hardness 139 BHN MPA 512.128 MPA 350.743 Cr + Cu + Mo + Ni + V = .148 Cr + Mo = .084
7552025	26	10 51169	8X3 3000 A105N THRD T	SA/A105N C 0.180 Co 0.009 Cr 0.160 Cu 0.250 Mn 0.990 Mo 0.020 Nb 0.004 Ni 0.070 P 0.009 S 0.018 Si 0.205 V 0.022 CE(Long Formula) = 0.41 T/S(PSI) 75,565 Y/S(PSI) 51,924 EL(%) 35.20 RA(%) 61.92 Brinell Hardness 137 BHN 137 BHN
7552572	28	25 51292	3 X 2 3000 A105N SOCK S	SA/A105N C 0.190 Cb 0.010 Co 0.003 Cr 0.120 Cu 0.020 Mn 1.020 Mo 0.002 Ni 0.010 P 0.005 S 0.015 Si 0.220 V 0.005 CE(Long Formula) = 0.39 T/S(PSI) 72,104 Y/S(PSI) 46,632 EL(%) 36.00 RA(%) 64.89 Brinell Hardness 137 BHN 137 BHN
7550026	29	25 51204	10-8 X2 3000 A105N SOCK S	SA/A105N C 0.190 Cb 0.002 Co 0.009 Cr 0.230 Cu 0.220 Mn 0.990 Mo 0.020 Ni 0.080 P 0.010 S 0.015 Si 0.209 V 0.021 CE(Long Formula) = 0.43 T/S(PSI) 76,132 Y/S(PSI) 51,289 EL(%) 35.50 RA(%) 61.34 Brinell Hardness 141 BHN 139 BHN

Qty - 12  
T - 501  
west Cen  
11/9/24 cc POW 242338V-01

**ASME STAMP SEC.II**

ED. 2023 ADD \_\_\_\_\_  
INT. al DATE 11/09/2024

We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks.

by Billie Jo Clemens  
Billie Jo Clemens  
Quality Assurance Representative



# CERTIFIED MILL TEST REPORT

LOG NO. F00000000198688

Page 6 of 6

BONNEY FORGE CORPORATION

P.O. BOX 330 • 14496 CROGHAN PIKE • MOUNT UNION, PA 17066-0330

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The Best Value -  
Price, Quality, Service  
All The Time.

CUSTOMER:

DATE 02/23/2024

CUSTOMER  
ORDER NO.:

BONNEY ORDER NO. B000339882

SHIP TO:

ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO. CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:
------	----------	---------	--

1. THE FITTINGS SUPPLIED ARE IN ACCORDANCE WITH PURCHASE ORDER SPECIFICATIONS.
2. THE MATERIAL SUPPLIED IDENTIFIED AS A105N WAS NORMALIZED IN ACCORDANCE WITH ASTM A105 HEAT TREATING REQUIREMENTS.
3. THE MATERIAL SUPPLIED AS A105N MEETS THE REQUIREMENTS OF BOTH NACE MR0103/ISO 17945 - 2015 & NACE MR0175/ISO 15156-2 - 2015 EDITION.
4. CERTIFYING ASTM A105-21 / ASME SA105-21 EDITION.
5. THE PRODUCT SUPPLIED WAS INSPECTED IN ACCORDANCE WITH EN 10204:2004 EDITION TYPE 3.1 INSPECTION DOCUMENT. (EUROPEAN STANDARD)
6. THE UNIT OF MEASURE FOR TENSILE AND YIELD (0.2%) STRENGTH ARE REPORTED IN PSI.
7. ELONGATION TEST RESULTS ARE OBTAINED USING STANDARD ROUND SPECIMEN, 2 INCH OR 50 MM GAGE LENGTH.

## ASME STAMP SEC.II

ED. 2023 ADD \_\_\_\_\_  
INT. as DATE 11/09/2024

We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks.

by Billie Jo Clemens

Billie Jo Clemens  
Quality Assurance Representative

ESSAR Steel Alberta Inc.

105 West Street, East St. Albert, Alberta, Canada T8A 7B4

13001-05	2010/11/09	2010/12/31	207349	-	TR	-611052	67813
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ALBERTA INDUSTRIAL METALS LTD  
4021 - 70TH STREET  
MED DEER ALBERTA  
T4E 1N5

ALBERTA INDUSTRIAL METALS LTD  
7660 49TH AVENUE  
CALGARY, ALBERTA  
T4E 4C6

**ROLL TEST REPORTS**  
KEMETROL CANADA INC. HERBERT  
ADVISES THAT THE CENTRAL SECTION  
BROKE IN THE ROLL TEST. THE  
SPECIFICATION IS MET. THE  
TESTING WAS PERFORMED IN  
ACCORDANCE WITH THE  
STANDARD PRACTICES.

**M. MCELREATH**  
REVIEWED SIGNATURE

THIS ROLL TEST WAS PERFORMED IN  
ACCORDANCE WITH THE  
STANDARD PRACTICES.  
A QUALIFIED PERSON HAS  
PERFORMED THE TEST AND  
NEEDS SIGNATURE (IF REQUIRED)  
CHECKED FOR APPROVING THE  
TEST RESULTS BY SIGNATURE

**EHK**

HOT ROLLED STEEL SHEET - HSLA - TO CHEN OF ASTM 36/CSA G40.21 44W (05)  
USLBS - CUT EDGE ACCEPTABLE - RESTRICTED GAUGE 1/2" - 3/4" - DRUM-CRITICAL  
SURFACE - T/R INFO ONLY-COIL END 1/HRAT

**TEST CERT 1: DRADSDEN, CA TEST CERT 2: PLATE TEST COUPON:**  
ASME STAMP SEC II

TEST REPORTS REQUIRED  
GEN MPC

ED. 3015 ADD 200160791 CM  
INT. DE DATE 11/9/2016 2010/12/31 20:08

100 QUALITY AND ENVIRONMENTAL CERTIFICATIONS AVAILABLE AT WWW.ESSARSTEELALBERTA.COM  
CERTS INDICATED WITH (+) MADE IN CANADA WITH DOMESTIC AND NORTH AMERICAN MATERIALS

PRODUCT SHIPPED  
OUR ITEM 001 DIMENSIONS .178 MIN X 48 X COIL

C.E. = 30

COIL NUMBER	HEAT-MS	NO. PIECES	WEIGHT	COIL NUMBER	HEAT-MS	NO. PIECES	WEIGHT
75027002	0040L-52	1	37820	75027003	0040L-53	1	37960
75027004	0040L-54	1	38602				

**MECHANICAL PROPERTIES**

TENSILE TESTS:

HEAT	SAMPLE	CRACK	COND	NETH	DIR	YIELD	TENSILE	ELONG
1840L	SRCC USPC	.1780	AR	.2	T	KSI	KSI	%
						53.3	75.0	20(2%)

ASME STAMP SEC. II

**CHEMICAL PROPERTIES**

HEAT	C	MN	P	S	SI	CR	NI	CU	MO	NL
1840L	WT %	WT %	WT %	WT %	WT %	WT %	WT %	WT %	WT %	WT %
	0.17	0.86	0.009	0.005	0.04	0.02	0.01	0.03	0.00	0.033

ED. 2010 ADD. JAH REC  
INT. 29 DATE 20/09/11  
.019 < 0.08

**ASME STAMP SEC. II**

PO: 988599 ALBERTA Industrial metals  
NAME PLT BCKING - 00  
- 180

ED. 2013 ADD. 2013  
INT. 29 DATE 08/03/2014

THE TEST RESULTS AND VALUES REPORTED HEREIN INDICATE ONLY THAT IN THE PARTICULAR CASE FOR WHICH THIS CERTIFICATE IS ISSUED MEETS THE REQUIREMENTS OF THE SPECIFICATION AND IS THE RESULT OF CHEMICAL ANALYSIS AND PHYSICAL PROPERTIES OF SUCH STEEL AND BY CONFORMANCE WITH THE REQUIREMENTS OF THE SPECIFICATION INDICATED. THE RESULTS OR VALUES REPORTED HEREIN CAN NOT BE USED TO QUALIFY THE STEEL FOR ANY SPECIFICATION OTHER THAN THE ONE INDICATED AND SHOULD BE USED ONLY FOR ANY FURTHER EVALUATION DESIGN OR CONSTRUCTION AT THE USER'S RISK. THE ACTUAL STRENGTH OF SUCH STEEL.

ASME STAMP SEC II

ED. 2017 ADD  
INT. 29 DATE 02/11/2018

CM2-160527ak DATE 04/02/2020