

① 622253

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 Kootenay Industries Ltd. 5982-86 Ave. S.E. Calgary, AB T2C 4L7 (Name and address of Manufacturer)

2. Manufactured for Shell Canada 400-4 Ave. S.W. Calgary, AB T2P 0J4 (Name and address of Purchaser)

3. Location of installation Peace River, AB SW 21-85-18 W5M (Name and address)

4. Type HORIZONTAL 12-079HS V8559.2 12-079-A REV.0 N/A 2012 (Horiz. or vert., tank) (Mfg.'s serial No.) (CRN) (Drawing No.) (Nat'l. Bd. No.) (Year Built)

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, Div. 1, 2010 Year

to 2011 Addenda(date) 2714 Code Case No. N/A Special Service per UG-120(d)

6. Shell: SA-516-70N 0.50" 0.125" 8'-0" 32'-0" (Mat'l. Spec. No., Grade) (Nominal Thickness) (Corr. Allow) (Inner Diameter) (Length overall)

7. Seams: TYPE 1 FULL 100% N/R N/R TYPE 1 FULL 100% 4 (Long. welded, dbl., sngl., lap, butt) (R.T. (spot or full)) (Eff. %) (H.T. temp.) (Time, hr) (Girth, (welded, dbl., sngl., lap, butt)) (R.T. (Spot or Full)) (Eff. %) No. of courses

8. Heads: (a) Material SA-516-70N (b) Material SA-516-70N (Spec. No., Grade) (Spec. No., Grade)

Table with 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). Rows (a) END 0.4375" 0.125" 2:1 CONCAVE, (b) END 0.4375" 0.125" 2:1 CONCAVE

If removable, bolts used (describe other fastening) N/A (Mat'l Spec. No., Grade, Size, No.)

9. MAWP 50 PSIG N/A at max. temp. 200°F N/A (Internal) (External) (Internal) (External)

Min. design metal temp -49°F at 50 PSIG Hydro, pneum., or comb. test pressure 75 PSIG Proof test N/A

10. Nozzles, inspection, and safety valve openings:

Table with columns: Purpose (Inlet, Outlet, Drain), No., Diameter or Size, Type, Material (Nozzle, Flange), Nozzle Thickness (Nom., Corr.), Reinforcement Material, Attachment Details (Nozzle, Flange), Location (Insp. Open.). Row: SEE ATTACHED SUPPLEMENTARY FORM U-4

11. Supports: Skirt NO Lugs NO Legs NO Other SADDLES Attached BTM WELDED (Yes or No) (Number) (Describe) (Where and how)

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

VOL. 1758.8 Cu. Ft. (49.8 Cu. M.) AQUA AMMONIA TANK RADIOGRAPHY AS PER PARA UW-11(a) IMPACT TEST EXEMPT AS PER UCS-66 Curve D (Heads & Shells), UCS-66(g) Fig. 84.1 (SWEET SERVICE) MANUFACTURE DRAWING# 12-079-A REV.2 1-2"CL300 Blind Flange c/w 8-5/8" Studs & 16-Nuts, 1-3"CL300 Blind Flange c/w 8-3/4" Studs & 16-Nuts, 1-10"CL150 Blind Flange c/w 12-7/8" Studs & 24-Nuts, 1-24"CL150 Blind Flange c/w 20-1 1/2" Studs & 40-Nuts. SA-193-B7M & SA-194-2HM

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 Number 38,258 Expires February 11, 2015

Date Sept. 12/12 Co. Name Kootenay Industries Ltd. Signed Tracy (Representative)

CERTIFICATE OF SHOP/FIELD INSPECTION

Vessel constructed by Kootenay Industries Ltd. at 5982-86 Ave. S.E. Calgary, AB

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 September 13th, 2012 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 Sept 13, 2012 Signed (Authorized Inspector) Commissions 14467A AB-4/6 (Nat'l Board Incl. endorsement, State, Province and No.)

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**FORM U-4 MANUFACTURER'S DATA REPORT SUPPLEMENTARY SHEET**  
**As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1**

1. Manufactured and certified by Kootenay Industries Ltd. 5982-86 Ave.S.E. Calgary, AB T2C 4L7  
(Name and Address of Manufacturer)

2. Manufactured for Shell Canada 400- 4 Ave. S.W. Calgary, AB T2P 0J4  
(Name and Address of Purchaser)

3. Location of installation Peace River, AB SW 21-85-18 W5M  
(Name and Address)

4. Type HORIZONTAL AQUA AMMONIA TANK 12-079HS  
(Horiz., vert., or sphere) (Tank, separator, heat exch., etc.) (Mfg's.Serial No.)

V8559.2 12-079-A Rev.0 N/A 2012  
(CRN) (Drawing No.) (Nat'l Bd. No.) (Year built)




10. Nozzles, inspection, and safety valve openings continued

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diameter or Size	Type	Material		Nozzle Thickness		Reinforcement Material	Attachment Details		Location (Insp. Open.)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
INLET	1	2" CL300	RFLWN	SA-350-LF2 CL.1	N/A	0.53"	1/8"	INHERENT	UW-16.1(c)	N/A	SHELL
VAPOR RECOVERY	1	1 1/2" CL300	RFLWN	SA-350-LF2 CL.1	N/A	0.56"	1/8"	INHERENT	UW-16.1(c)	N/A	SHELL
MAKE UP GAS	1	1 1/2" CL300	RFLWN	SA-350-LF2 CL.1	N/A	0.56"	1/8"	INHERENT	UW-16.1(c)	N/A	SHELL
SPARE	1	3" CL300	RFLWN	SA-350-LF2 CL.1	N/A	0.62"	1/8"	INHERENT	UW-16.1(c)	N/A	SHELL
PSV 1	1	3" CL300	RFLWN	SA-350-LF2 CL.1	N/A	0.62"	1/8"	INHERENT	UW-16.1(c)	N/A	SHELL
PT	1	2" CL300	RFLWN	SA-350-LF2 CL.1	N/A	0.53"	1/8"	INHERENT	UW-16.1(c)	N/A	SHELL
LT	2	2" CL300	RFLWN	SA-350-LF2 CL.1	N/A	0.53"	1/8"	INHERENT	UW-16.1(c)	N/A	SHELL
VENTILATION	1	10" CL150	RFLWN	SA-350-LF2 CL.1	N/A	1.0"	1/8"	INHERENT	UW-16.1(c)	N/A	SHELL
SPARE	1	2" CL300	RFLWN	SA-350-LF2 CL.1	N/A	0.53"	1/8"	INHERENT	UW-16.1(c)	N/A	SHELL
PROCESS FEED	1	2" CL300	RFLWN	SA-350-LF2 CL.1	N/A	0.53"	1/8"	INHERENT	UW-16.1(c)	N/A	SHELL
PSV 2	1	3" CL300	RFLWN	SA-350-LF2 CL.1	N/A	0.62"	1/8"	INHERENT	UW-16.1(c)	N/A	SHELL
MW c/w BLIND & DAVIT	1	24" CL150	RFLWN	SA-350-LF2 CL.1	N/A	1.12"	1/8"	INHERENT	UW-16.1(c)	N/A	HEAD

Certificate of Authorization: Type "U" No. 38,258 Expires February 11, 2015

Date Sept. 12/12 Name Kootenay Industries Ltd. Signed *Tracy Old*  
(Manufacturer) (Representative)

Date Sept 13, 2012 Name *[Signature]* Commissions 14467A AB-416  
(Authorized Inspector) (Nat'l Board incl. endorsement, State, Province and No.)

 W RT-1	<b>CERTIFIED BY</b>  <b>Kootenay</b> INDUSTRIES LTD	
	MAWP <u>50</u>	PSI AT <u>200</u> °F
MDMT <u>-49</u>	°F AT <u>50</u> PSI	
SERIAL NO. <u>12-079HS</u> YEAR BUILT <u>2012</u>		
CRN <u>V8559.2</u>	 622253	
VESSEL TYPE <u>AQUA AMMONIA TANK</u>		
SHELL <u>SA-516-70N</u>		
THICKNESS <u>0.50 INCHES</u>		
TAG <u>V-100</u>		
5982 - 86 AVE S.E. CALGARY, CANADA Ph: 403-720-2722		

Job # 12-079