

**FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS** ④616499  
**(Alternative Form for Single Chamber, Completely Shop or Field Fabricated Vessels Only)**  
**As Required by the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1**

1. Manufactured and certified by: PENFABCO LTD 5715 - 56 Avenue NW, Edmonton, AB T6B 3G3  
(Name and address of Manufacturer)

2. Manufactured for: Twist Oilfield Manufacturing 5209 - 58A Street Close Stettler, AB T0C 2L2  
(Name and address of Purchaser)

3. Location of installation Stock  
(Name and address)

4. Type: Vertical PE-12461 P7883.213 PE-7716BB Rev E N/A 2012  
(Horizontal or vertical tank) (Manufacturer's serial number) (CRN) (Drawing number) (National Board number) (Year Built)

5. The chemical and physical properties of all parts meet the requirements of material specification of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to the ASME rules, Section VIII, Division 1 2010  
Year

to 2011 N/A N/A  
{addenda(date)} (Code Case numbers) {Special Service per UG-120(d)}

6. Shell: SA-516-70N 1.250" 1/8" 27.5" 10' 0" s/s  
(Material spec. number, grade) (Nominal thickness) (Corr. Allow.) (inner diameter) (length overall)

7. Seams: Type 1 Full 100% 1150° F 75 Min Type 1 Full 100% 1  
[Long. (welded, dbl, snl, lap, butt)] [R.T. (spot or full)] [Eff., %] [H.T. temp.] (Time, hr) [Girth. (welded, dbl, snl, 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)

	Location (Top, Bottom, Ends)	Thickness		Radius		Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
		Min.	Corr.	Crown	Knuckle					
(a)	Top	1.1875"	1/8"	N/A	N/A	2:1	N/A	N/A	N/A	Concave
(b)	Bottom	1.1875"	1/8"	N/A	N/A	2:1	N/A	N/A	N/A	Concave

If removable, bolts used (describe other fastening) N/A  
(Material spec. number grade, size, number)

9. MAWP 1440 psi N/A at max temp. 130° F N/A  
(Internal) (External) (Internal) (External)

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

Proof Test N/A

10. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain, etc)	No.	Diam. or Size	Type	Material		Nozzle Thickness		Reinforcement Material	Attachment Details		Location (Insp. Open.)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
Inlet, Outlet	2	NPS 4	CL 600 RFWN	SA-106B	SA-105N	.674"	1/8"	SA-516-70N	UW16.1(c)	Type 1	Top Hd/Shell
Drain	1	NPS 2	CL 600 RFWN	SA-106B	SA-105N	.436"	1/8"	Not Required	UW16.1(c)	Type 1	Bottom Head
Outlets, LC's	4	NPS 2	CPLG	SA-105N	N/A	CL3000	1/8"	Not Required	UW16.1(a)	N/A	Shell
Inspect, HLSD, PSV	4	2.375"	CPLG	SA-105N	N/A	CL3000	1/8"	Not Required	UW16.1(a)	N/A	Shell
LG's, TI	5	NPS 3/4	CPLG	SA-105N	N/A	CL6000	1/8"	Not Required	UW16.1(a)	N/A	Shell
PI	1	NPS 1/2	CPLG	SA-105N	N/A	CL6000	1/8"	Not Required	UW16.1(a)	N/A	Shell

11. Supports: Skirt Yes Lugs 0 Legs 0 Others None Attached Welded to Bottom Head  
(Yes or No) (Number) (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: N/A  
(List the name of part, item number, Manufacturer's name and identifying stamp)

Impact Test exempt per UG-20(f) 1-5, UCS-66(a) & (c) RT per UW-11(a)  
 Volume 45.3 cu.ft. (1.28 m3) PSV Installed in Piping by Others per UG-125(g)  
 Vertical Separator Manufactured to Dwrg. PE-12459 Rev 0

**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 Boiler and Pressure Vessel Code, Section VIII, Division 1. "U" Certificate of Authorization Number 14,383  
 expires 12/28, 2013

Date 08/16/12 Co. Name PENFABCO LTD Signed M. Babin  
(Manufacturer) (Representative)

**CERTIFICATE OF SHOP/FIELD INSPECTION**

Vessel constructed by PENFABCO LTD at 5715 - 56 Avenue NW Edmonton, AB T6B 3G3  
 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 August 16, 2012, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME Boiler and Pressure vessel Code, Section VIII, Division 1. By signing this certificate neither the Inspector nor his/her employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his/her 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 AUG 16 2012 Signed M. Paul Commissions NB14446A, AB422  
(Authorized Inspector) [National Board (incl endorsements) State, Province and number]