

A 614366

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 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 Canada
2. Manufactured for: Foremost Stettler c/o Foremost Universal LP 6614 - 50 Avenue Lloydminster, AB T9V 2W8
3. Location of installation: Stock
4. Type: Horizontal PE-12611 V9944.2 Sht. 1 & 2 N/A 2013
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
6. Shell: SA-516-70N 7/8" 1/8" 36" 12' 0" s/s
7. Seams: Type 1 Full 100% 1150° F 60 Min Type 1 Full 100% 1
8. Heads: (a) Material SA-516-70N (b) Material SA-516-70N

Table with 10 columns: Location (Top, Bottom, Ends), Thickness (Min, Corr), Radius (Crown, Knuckle), Elliptical Ratio, Conical Apex Angle, Hemispherical Radius, Flat Diameter, Side to Pressure (Convex or Concave). Rows (a) and (b) show End locations with thickness .8125" and radius N/A.

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

9. MAWP 740 psi N/A at max temp. 100° F N/A
Min. design metal temp. -50° F at 740 psi Hydro. , pneu. or comb. test pressure Hydrostatic 1110 psi
Proof Test N/A

10. Nozzles, inspection, and safety valve openings: Table with 12 columns: Purpose (Inlet, Outlet, Drain, etc), No., Diam. or Size, Type, Material (Nozzle, Flange), Nozzle Thickness (Nom., Corr), Reinforcement Material, Attachment Details (Nozzle, Flange), Location (Insp. Open.).

11. Supports: Skirt No Lugs 0 Legs 0 Others Saddles Attached Welded to Bottom Shell

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

Impact Test exempt per UCS-66(a)(b) & (g) Studs per Fig UCS-66 Note C RT per UW-11(a) PSV Installed in Piping by Others per UG-125(g) Volume 94.3 cu.ft. (2.67 m3) M/W RF Blind Flange NPS 20 CL 300 SA-350-LF2 CL1, PWHT 60 Min @1150° F P.I.T. Exempt per UCS-67(a)3 Horizontal Separator Studs 24 ea - 1 1/4 x 8 1/4" SA-194-2H/SA-193-B7 (8UNR-2A) Mfg to Dwg PE-12611 Rev 3

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 01/09/13 Co. Name PENFABCO LTD Signed M. Bazin

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 January 9, 2013, 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 JAN 09 2013 Signed [Signature] Commissions AB 95 NB 12143 A, B

**CONNECTION SCHEDULE**

MARK	QTY	SIZE	SCH	CLASS & TYPE	SERVICE	MINIMUM PROTECTION		WELD SIZE			BOM ITEM NO.
						INSIDE	OUTSIDE	A	B	C	
N1	1	4"	.88"	300 RF LWN INLET		6"		3/8"			1
N2	1	4"	.88"	300 RF LWN GAS OUTLET		6"		3/8"			8
N3	1	2"	.66"	300 RF LWN FI		6"		3/8"			6
N4	1	2"	.66"	300 RF LWN TI		6"		3/8"			6
N5A	1	2"	.66"	300 RF LWN WATER LG		6"		3/8"			6
N5B	1	2"	.66"	300 RF LWN WATER LG / DRAIN		6"		3/8"			6
N6A	1	2"	.66"	300 RF LWN HC LG		6"		3/8"			6
N6B	1	2"	.66"	300 RF LWN HC LG / DRAIN		6"		3/8"			6
N7	1	2"	.66"	300 RF LWN WATER OUTLET		6"		3/8"			6
N8	1	2"	.66"	300 RF LWN HC OUTLET		6"		3/8"			6
N9	1	2"	.66"	300 RF LWN HC OUTLET		6"		3/8"			6
N10	1	3"	1.24"	300 RF HB WATER LC		6"		3/8"			6
N11	1	3"	1.24"	300 RF HB WATER LC		6"		3/8"			7
N12	1	3"	1.24"	300 RF HB HLSD		6"		3/8"			7
M1	1	20"	1.56"	300 RF LWN MANWAY C/P BLIND		1 3/8"		3/8"			3, 9, 10, 12, 13

**DESIGN NOTES**

DESIGN & FABRICATE TO ASME SECTION VIII DIVISION 1 REGISTER IN AB, BC AND SK 2010 EDITION, 2011 ADDENDA

REGISTER IN AB, BC AND SK 2010 EDITION, 2011 ADDENDA

DESIGN TEMPERATURE: 100° F

DESIGN PRESSURE (MAWP): 740 PSIG

MINIMUM DESIGN METAL TEMPERATURE (MDMT): -50° F AT 740 PSIG

**IMPACT TESTS:**

EXEMPT PER UCS-66a, UCS-66b, UCS-66g.

STUDS PER FIG UCS-66 NOTE C

WELDS (PRODUCTION) IMPACT TESTS ARE WAVED IN ACCORDANCE WITH THE REQUIREMENTS OF UCS-66d(1) AT THE MANUFACTURER THROUGH IMPACT TESTING FOR THE APPLICABLE SFA SPECIFICATION AT A TEMPERATURE NOT WARMER THAN THE MDMT.

**RADIOGRAPHY:** FULL PER UW-11g (RT-1) PER UCS-56: YES, 1125° F ± 25° F FOR 60 MINUTES (MINIMUM) ON ALL CATEGORY 'D' WELD BEFORE PWHT.

ULTRASONICS ON ALL CATEGORY 'D' WELD BEFORE PWHT.

WELDING PROCEDURE SPECIFICATIONS (WPS) TO BE USED AFTER PWHT.

HARDNESS TEST (ONCE TEST PER WPS SECTION 5.9.1) WHT.

HYDROSTATIC TEST PRESSURE: 1110 PSIG (CHARTED)

CORROSION ALLOWANCE: 1/8"

WEIGHT FULL OF WATER: 13,400 LBS

**GENERAL NOTES**

- QUALITY CONTROL PROGRAM NUMBER: AQP-1046(S)
- WELDING PROCEDURE REGISTRATION NUMBER: WF-418.2
- WELDED HYDROCARBONS
- EXPOSED INSIDE OR OUTSIDE EDGES OF NOZZLES OR OPENINGS SHALL HAVE AN 1/8" MINIMUM RADIUS.
- WELDED HYDROCARBONS
- ALL TACK WELDS SHALL BE FULL PENETRATION JOINTS
- ALL TACK HOLES TO STRADDLE CENTRES LINES
- ALL TACK HOLES TO BE FULL PENETRATION JOINTS
- CLEAN AND COVER ALL OPENINGS FOR SHIPMENT.
- INTERNAL WELDS SHALL BE FULL PENETRATION JOINTS
- GRIND ALL INTERNAL WELDS SMOOTH.
- CRN CALCULATION: 30-2-0740-12611-12

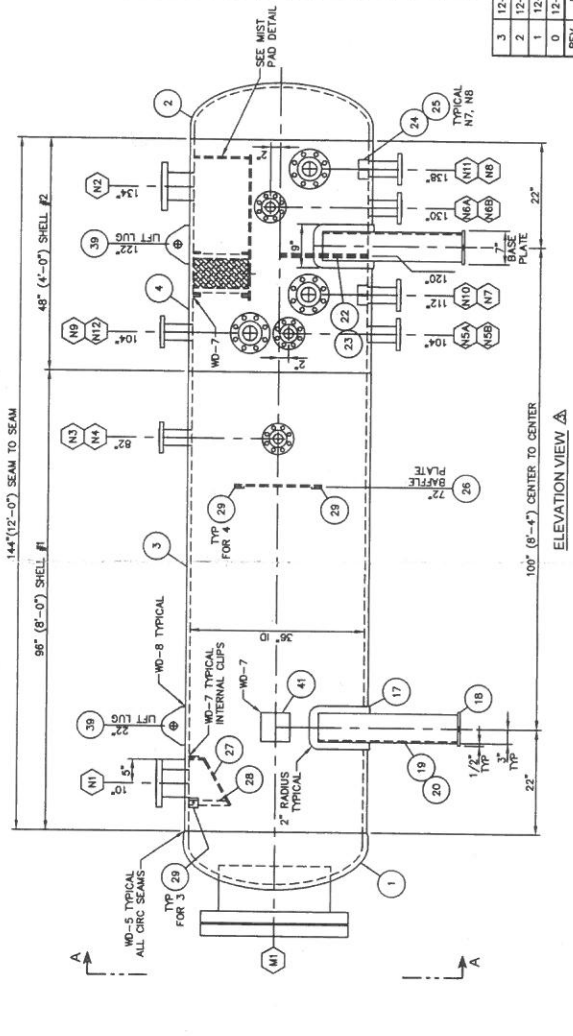
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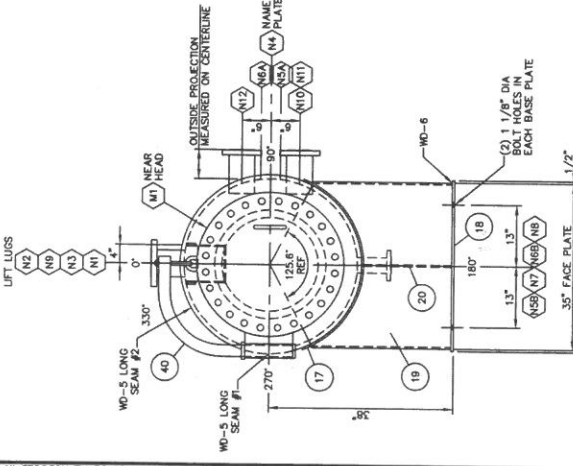
(1) UNIT REQUIRED  
QOS NO.  
PC-12611

APPROVED FOR CONSTRUCTION  
BY: *MJB*  
DATE: *Oct 25/12*

CRN: PENDING



STANDARD TOLERANCES  
FABRICATION:  
GENERAL DEVIATION: ± 1/8"  
ANGULARITY: ± 1/4"  
WELD PREPARATION:  
LAND: 0.04" ± 1/32"  
ANGULARITY: ± 1/16"



CANADIAN REGISTRATION NUMBER  
3 12-10-25 ALL 2" WERE RFWM/PIPE, DELETE WD-2  
2 12-10-24 ISSUED FOR CONSTRUCTION  
1 12-10-01 REVISED, ISSUED FOR REGISTRATION  
0 12-09-18 ISSUED FOR APPROVAL

PENFABCO LTD.  
5715 - 56 ASHME AVE. AMMONIA, BC  
PHONE: (250) 434-0222 FAX: (780) 436-1467

CLIENT: STETLER OIL & GAS  
DATE: 12-09-14  
JOB NO: 3983  
DRAWN BY: P.J.O.  
CHECKED BY: MB  
APP BY: P.J.O.

3 PHASE SEPARATOR - FULL SOUR  
36" ID x 12'-0" S/S  
740 PSIG AT -50° F / 100° F  
SHEET 1 OF 2  
DWG NO: PE-12611  
REV 3

BLUE DIAMOND DESIGN LTD. 1977 VALLEY VIEW PLACE, VICTORIA, BC V8B 6H6 TELEPHONE: (250) 381-4612 EMAIL: dgsd@shaw.ca

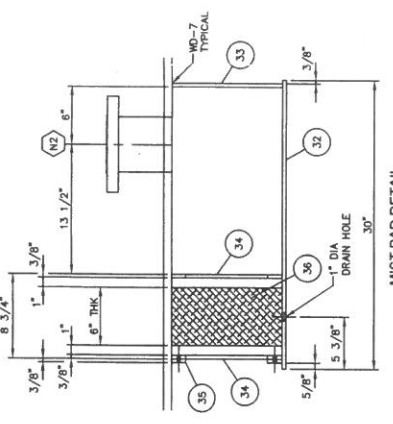
THE CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND MAY NOT BE REPRODUCED IN ANY FORM WITHOUT WRITTEN PERMISSION.

BILL OF MATERIALS				
ITEM	QTY	COMMENT	DESCRIPTION	MATERIAL
1	1	MANWAY HEAD	PL - 3/8" ID x 1 1/8" THK (1.0025" MIN) 2:1 SE, 2" SF, 3:1 SCARF	SA-516-70N
2	1	HEAD	PLATE - 3/8" ID x 7/8" THK (1.0025" MIN) 2:1 SE, 2" SF	SA-516-70N
3	1	SHELL #1	PLATE - 3/8" ID x 7/8" THK x 8'-0" LG	SA-516-70N
4	1	SHELL #2	PLATE - 3/8" ID x 7/8" THK x 4'-0" LG	SA-516-70N
5	6	N3 - H9	FLANGE - 2" CLASS 300 RF LWN x 9" LG	SA-350-LF2 Q11
6	3	N10, N11, N12	FLANGE - 3" CLASS 300 RF HB x 9" LG	SA-350-LF2 Q11
7	3	N1, N2	FLANGE - 4" CLASS 300 RF LWN x 8" LG	SA-350-LF2 Q11
8	2	M1	FLANGE - 20" CLASS 300 RF LWN x 12" LG	SA-350-LF2 Q11
9	1	M1	FLANGE - 20" CLASS 300 RF BLIND	SA-350-LF2 Q11
10	1	M1	GASKET - 20" CLASS 300 SPIRAL WOUND x 1/8" THK	316 SS
11	1	M1	STUDS - 1 1/4" DIA x 8 1/4" LG c/w 2 NUTS EACH (SA-194-2H)	SA-192-87
12	13	M1		
13	24	M1		
14	14	M1		
15	15	M1		
16	16	M1		
17	2	WEAR PLATE	PLATE - 3/8" THK x 9" x 46 1/4" LG	SA-516-70N
18	2	BASE PLATE	PLATE - 1/2" THK x 7" x 56" LG	SA-36 / 44W
19	2	FACE/SIDE PLATE	PLATE - 3/8" THK x 28 11/16" x 47" LG TRIM, BREAK 6"-35"-6"	SA-36 / 44W
20	2	RIB PLATE	PLATE - 3/8" THK x 6" x 18 1/4" LG	SA-36 / 44W
21	1	WEIR PLATE RING	PLATE - 3/8" THK x 35 7/8" OD x 18" HIGH x 1 1/2" WIDE	SA-36 / 44W
22	1	WEIR	PLATE - 1/4" THK x 35 7/8" OD x 18" HIGH	REMOVABLE SA-36 / 44W
23	1	VORTEX BREAKER	PLATE - 1/4" THK x 2" x 4" LG	NSB, NRB SA-36 / 44W
24	4	VORTEX BREAKER	PLATE - 1/4" THK x 2" x 1 7/8" LG	FORM INTO CROSS SA-36 / 44W
25	1	BAFFLE PLATE	PL - 3/8" THK x 35 7/8" OD x 18" HIGH	REMOVABLE, SEE DETAIL SA-36 / 44W
26	1	INLET DEFLECTOR	PLATE - 3/8" THK x 8" x 14" LG	TRIM, BREAK AT 30", 3'-1"
27	2	GUSSETS	FLAT BAR - 1/4" THK x 1" x 8" LG	SA-36 / 44W
28	7	CLIPS	FLAT BAR - 1/4" THK x 2" x 2" c/w CENTERED 9/16" DIA HOLE	SA-36 / 44W
29	31	BOTTOM PLATE	PLATE - 3/8" THK x 30" x 30 1/2" LG	MIST PAD, SEE DETAIL SA-36 / 44W
30	1	END PLATE	PLATE - 3/8" THK x 35 7/8" OD x 11 5/8" HIGH	SEE DETAIL SA-36 / 44W
31	2	MIST PAD RINGS	PLATE - 3/8" THK x 35 7/8" OD x 11 5/8" HIGH x 1 1/2" WIDE	SA-36 / 44W
32	2	MIST PAD CUP	PLATE - 3/8" THK x 1 1/2" x 12" LG	SEE DETAIL SA-36 / 44W
33	1	MIST PAD	6" THK x 35 7/8" OD x 11 5/8" HIGH x 9 7/8" c/w 1" CS GRID	316L SS
34	2	LIFT LUGS	PLATE - 1/2" THK x 5" x 8" LG	SA-516-70N
35	1	M1	STANDARD 20" CLASS 300 MANWAY DAMP	SA-36 / 44W
36	1	NAME PLATE	STANDARD NAME PLATE AND BRACKET	SS / SA-36
37	42			

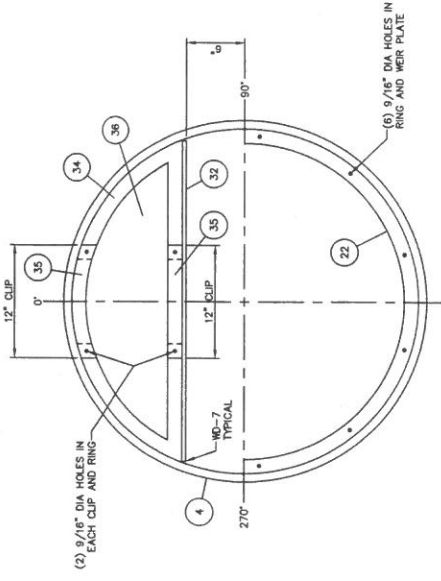
REV	DATE	REVISION	P.O. NO.	BY	APP
3	12-10-25	REVISE BOM	P.O. MB		
2	12-10-24	ISSUED FOR CONSTRUCTION	P.O. MB		
1	12-10-01	REVISED, ISSUED FOR REGISTRATION	P.O. MB		
0	12-09-18	ISSUED FOR APPROVAL	P.O. MB		

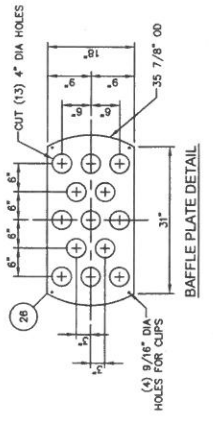
<b>PENFABCO LTD.</b> 5715 - 56 AVENUE NW, EDMONTON, AB T6B 3C3 TELEPHONE: (780) 434-0222 FAX: (780) 436-1467	
CLIENT:	STETTLER OIL & GAS
DATE:	12-09-14
JOB NO:	3993
DRAWN BY:	P.D.
CHECKED BY:	MB
APP BY:	P.D.
3 PHASE SEPARATOR - FULL SOUR 36" ID x 12'-0" S/S 740 PSIG AIT - 50 F / 100 F SHEET 18 OF 24 DWG NO: PE-12611 REV 3	



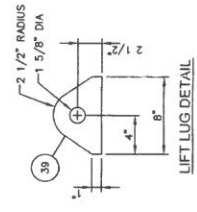
MIST PAD DETAIL  
SIDE VIEW  
SCALE: 2X



WEIR PLATE RING DETAIL  
END VIEW  
SCALE: 2X



BAFFLE PLATE DETAIL



LIFT LUG DETAIL