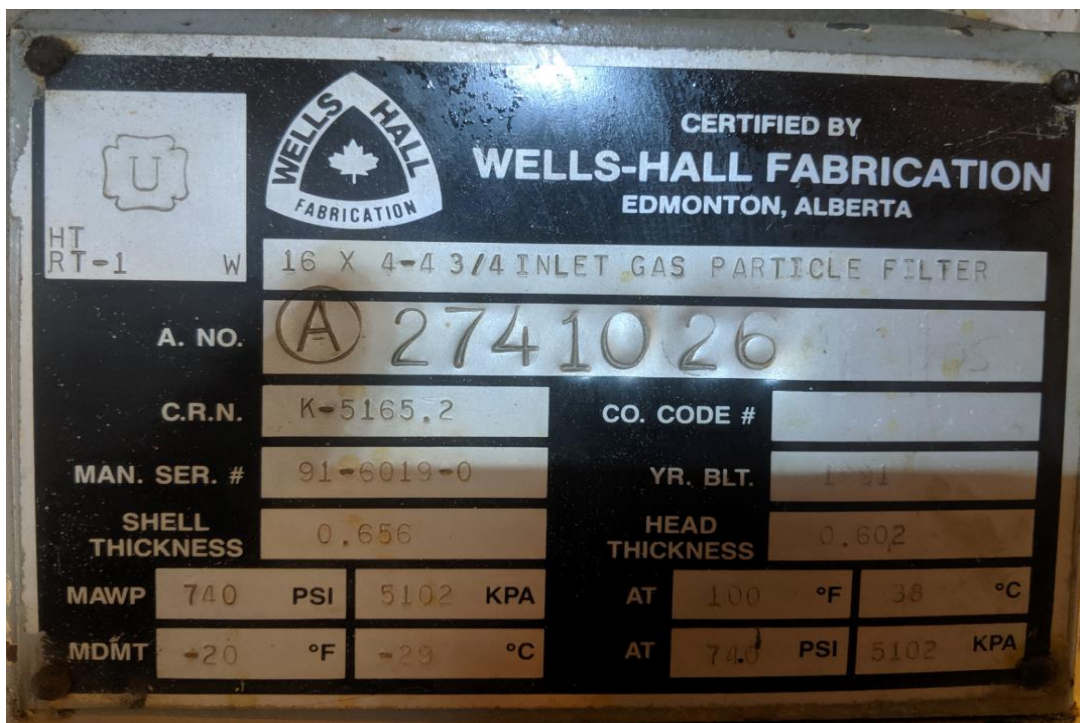
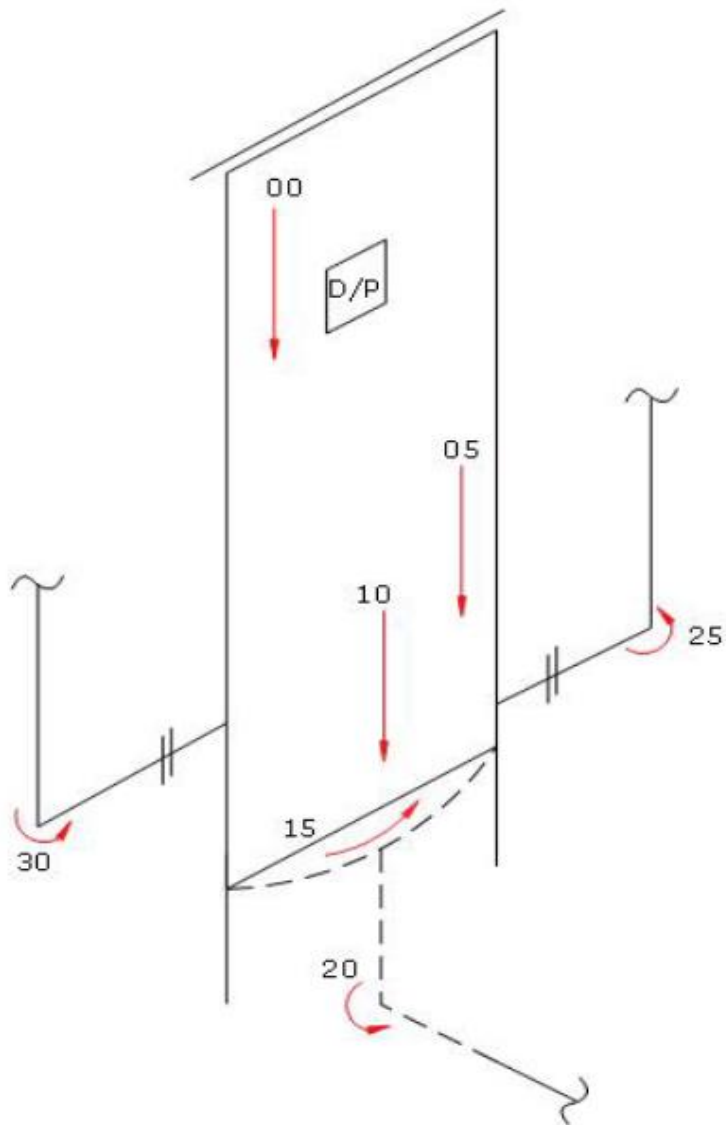




Location Name:	ANSELL	LSD:	07-27-051-19 W5M
Jur #:	A2741026	Equipment/Tag No.	66043907
Equipment Description:	GAS PARTICLE FILTER		
Manufacturer:	WELLS-HALL FABRICATION		
Serial Number:	91-6019-0	CRN:	K5165.2
Shell MAWP:	5102	KPA	Shell Design Temp: 38 °C
Tube MAWP:		KPA	Tube Design Temp: °C
Shell Material:	SA-106-B	Head Material:	SA-105-N
Shell Thickness:	16.66	mm	Head Thickness: T 416 / B 15.291 mm
Corrosion Allowance:	3.175	mm	Date Built: 1991
Size:	406.4	mm	Pipe / Rolled Plate:
RT:	1	Streamline Report #:	STL-19-0246-DMS 35

NOTES: SEE PREV REPORT USE PREV REPORT IN FOLDER FOR ANY EMPTY INFORMATION









Ultrasonic Corrosion Survey

*All values are in millimeters unless otherwise stated.

Survey Name: Husky Energy

Date: June 12 2019

Streamline Report #: STL-19-0246-DMS 35

Inspector: Dylan Sundquist

LSD: 07-27-051-19 W5M	Area: ANSELL	Location: GAS PLANT
Jur #: A2741026	Tag Number: 66043907	Vessel Name: GAS PARTICLE FILTER
CRN: K5165.2	Year Built: 1991	Serial Number: 91-6019-0
RT: 1	Vessel CA: 3.175 mm	Manufacturer: WELLS-HALL FABRICATION
	Shell MAWP: 5102 KPA	Tube MAWP: MAWT: °C
		MAWT: °C
		Pipe/Plate
CML Description	Baseline	Flange ANSI:
00 SHELL	2014 2019	Material: SA-106-B
Shape: Cylindrical	Min 16.89 16.89	CA 3.175
OD: 406.4	Avg 17.07 16.94	Nominal 16.662
Spec: ASME VIII Div.1	Comments:	T Min STCR mm/yr LTCR mm/yr
		0.000 0.000
		Remaining Life:
		Retirement Date:
CML Description	Baseline	Flange ANSI:
05 SHELL	2014 2019	Material: SA-106-B
Shape: Cylindrical	Min 16.61 16.43	CA 3.175
OD: 406.4	Avg 16.81 16.59	Nominal 16.662
Spec: ASME VIII Div.1	Comments:	T Min STCR mm/yr LTCR mm/yr
		0.035 0.008
		Remaining Life:
		Retirement Date:
CML Description	Baseline	Flange ANSI:
10 SHELL	2014 2019	Material: SA-106-B
Shape: Cylindrical	Min 16.38 16.46	CA 3.175
OD: 406.4	Avg 16.84 16.69	Nominal 16.662
Spec: ASME VIII Div.1	Comments:	T Min STCR mm/yr LTCR mm/yr
		0.000 0.007
		Remaining Life:
		Retirement Date:
CML Description	Baseline	Flange ANSI:
15 HEAD	2014 2019	Material: SA-105-N
Shape: Ellipsoidal	Min 15.42 15.42	CA 3.175
OD: 406.4	Avg 15.62 15.62	Nominal 15.291
Spec: ASME VIII Div.1	Comments:	T Min STCR mm/yr LTCR mm/yr
		0.000 0.000
		Remaining Life:
		Retirement Date:



Ultrasonic Corrosion Survey

*All values are in millimeters unless otherwise stated.

Survey Name: Husky Energy

Date: June 12 2019

Streamline Report #: STL-19-0246-DMS 35

Inspector: Dylan Sundquist

LSD:	07-27-051-19 W5M	Area:	ANSELL	Location:	GAS PLANT
Jur #:	A2741026	Tag Number:	66043907	Vessel Name:	GAS PARTICLE FILTER
CRN:	K5165.2	Year Built:	1991	Serial Number:	91-6019-0
RT:	1	Vessel CA:	3.175 mm	Manufacturer:	WELLS-HALL FABRICATION
		Shell MAWP:	5102 KPA	Tube MAWP:	KPA
		MAWT:	38 °C	MAWT:	°C
					Pipe/Plate
					0
CML Description		Baseline		Flange ANSI:	Material: SA-234-WPB
20	NOZZLE	2014	2019	Flag	CA
Shape:	90° Elbow	Min	9.02	8.94	5.918
OD:	33.401	Avg	9.40	9.45	3.175
Spec:	ASME VIII Div.1	Comments:			9.093
					T Min
					STCR mm/yr
					0.016
					LTCR mm/yr
					0.005
					Remaining Life:
					Retirement Date:
CML Description		Baseline		Flange ANSI:	Material: SA-234-WPB
25	PIPING	2014	2019	Flag	CA
Shape:	90° Elbow	Min	7.26	7.21	6.223
OD:	168.275	Avg	7.62	7.57	0.889
Spec:	ASME B31.3	Comments:			7.112
					T Min
					STCR mm/yr
					0.009
					LTCR mm/yr
					0.000
					Remaining Life:
					Retirement Date:
CML Description		Baseline		Flange ANSI:	Material: SA-234-WPB
30	PIPING	2014	2019	Flag	CA
Shape:	90° Elbow	Min	6.27	6.10	6.223
OD:	168.275	Avg	6.99	7.11	0.889
Spec:	ASME B31.3	Comments:	EROSION FOUND		7.112
					T Min
					STCR mm/yr
					0.035
					LTCR mm/yr
					0.036
					Remaining Life:
					Retirement Date:

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

*CORRECTED COPY

① 274 102 6
N.S.A.F. 100
APR 22/75

1. Manufactured and certified by WELLS-HALL FABRICATION & CONSTRUCTION LTD. (Name and address of manufacturer)
2. Manufactured for PALL PROCESS FILTRATION CO. / PENELOPE RESOURCES LTD. (Name and address of purchaser)
3. Location of Installation TURNER VALLEY GAS PLANT, A.B. (Name and address)
4. Type VERTICAL 11-6019-0 K-SIGES 44-A-6019-0 (Name, 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, Division 1. Year 1989

- to WINTER '90, ADDENDUM 2
6. Shell: SA-106-GR.B 0.656" 0.125" 1'-2 1/16" 4'-4 3/4" 8
7. Seams: SEAMLESS N/A 100% 1150° 1 hr 32 min EQUIV. 2H 3HT FULL CNE
8. Heads: (a) Matl. SA-105N (Spec. No., Grade) (b) Matl. SA-516-70 (Spec. No., Grade)

	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)
(a)	TOP	16"	ANSI	300"	BLIND					
(b)	BOTTOM	0.602"	0.125"			2:1				CONCAVE

- If removable, bolts used (describe other fastenings) 14" BUN-2B, SA-194 GR. 2M / 14" BUN-2A, SA-193 GR. B7M
9. MAWP 740 psi at max. temp. 100 °F
Min. design metal temp. -20 °F at 740 psi. Hydro., pneu., or comb. test pressure 1110 psi.

10. Nozzles, Inspection and safety valve openings:

Purpose (Inlet, Outlet, Drain)	No.	Diam. or Size	Type	Matl.	Nom. Thk.	Reinforcement Matl.	How Attached	Location
INLET	1	6"	R.F.W.N.	SA-106-GR.B	SCH. 160		WELDED	
OUTLET	1	6"	R.F.W.N.	SA-106-GR.B	SCH. 160		WELDED	SHELL
DRAIN	2	1"	R.F.W.N.	SA-106-GR.B	SCH. XXH		WELDED	
DIFF. PRESS. CONN.	2	1"	R.F.W.N.	SA-106-GR.B	SCH. XXH		WELDED	
VENT	1	1"	R.F.W.N.	SA-106-GR.B	SCH. XXH		WELDED	
FILTER ACCESS	1	16"	R.F.W.N.	SA-105N	SCH. 60		WELDED	SHELL

11. Supports: Skirt YES Lugs ONE Legs — Other — Attached WELDED TO SHELL (BOTH)
12. Remarks: Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: 16" O.D. X 4'-4 3/4" X 740" D.P. + 1/2" C.A. INLET GAS PARTICLE FILTER VOL: 6.01 ft³ WT: 1400 lbs. NO IMPACT TESTING REQUIRED PER UCS-66 & UCS-68C * M.D.M.T. CORRECTED FROM 100°F TO -20°F.

CERTIFICATE OF SHOP 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. 14595, expires JULY 31, 1993.
Date AUG 29, 91 Co. name WELLS-HALL FAB. & CONST. LTD. Signed Bob Jangou

CERTIFICATE OF SHOP INSPECTION

Vessel constructed by WELLS-HALL FABRICATION & CONSTRUCTION LTD. at EDMONTON, A.B.
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 THE GOVERNMENT OF ALBERTA,
have inspected the component described in this Manufacturer's Data Report on August 26, 1991, 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 9/10/91 Signed [Signature] Commissions ALBERTA

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

① 2741026
N.S.A.F. PER

1. Manufactured and certified by WELLS-HALL FABRICATION & CONSTRUCTION LTD. (Name and address of manufacturer)
2. Manufactured for TURNER VALVE & FLANT LTD. (Name and address of purchaser)
3. Location of Installation TURNER VALVE & FLANT LTD. (Name and address)
4. Type VERTICAL 11-6011-0 K-5165.3 44-A-6011-0 (Ident. or cert. tank) (Mfg's serial No.) (ICRNI) (Drawing No.)
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-GR.B 0.656" 1.125" 1'-2 1/16" 4'-4 3/4" 7/8 (Mat. (Spec. No., Grade)) (Nom. T.A. (in.)) (Corr. Allow. (in.)) (Diam. I.D. (ft. & in.)) (Length (overall) (ft. & in.))
7. Seams: SEAMLESS N/A 100% 1150° 1 hr 32 min. EQUIV. D1 BUTT FULL CNE (Long. (Welded, Dbl., Sngl., Lap, But)) (R.T. (Spot or Full)) (Eff. (%) (H.T. Temp. (°F)) (Time (hr)) (Girth (Welded, Dbl., Sngl., Lap, But)) (R.T. (Spot, Partial, or Full)) (No. of Courses)
8. Heads: (a) Matl. SA-105N (Spec. No., Grade) (b) Matl. SA-516-70 (Spec. No., Grade)
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).
(a) TOP 16" ANSI 300" BLIND
(b) BOTTOM 0.602" 0.125" 2:1 CONCAVE

If removable, bolts used (describe other fastenings) 14" BUN-2B SA-193 GR.87M / 14" BUN-2A SA-193 GR.87M (Mat., Spec. No., Gr., Size, No.)
9. MAWP 110 psi at max. temp. 100 °F
Min. design metal temp. 100 °F
psi Hydro, pneu., or comb. test pressure 110 psi.

10. Nozzles, inspection and safety valve openings:

Purpose (Inlet, Outlet, Drain)	No.	Diam. or Size	Type	Nom. Thk.	Reinforcement Matl.	How Attached	Location
INLET	1	6"	R.F.W.N.	SA-106-GR.B SCH. 160	---	WELDED	---
OUTLET	1	6"	R.F.W.N.	SA-106-GR.B SCH. 160	---	WELDED	SHELL
DRAIN	2	1"	R.F.W.N.	SA-106-GR.B SCH. XXH	---	WELDED	---
DIFF. PRESS. COUPL.	2	1"	R.F.W.N.	SA-106-GR.B SCH. XXH	---	WELDED	---
VENT	1	1"	R.F.W.N.	SA-106-GR.B SCH. XXH	---	WELDED	---
FILTER ACCESS	1	16"	R.F.W.N.	SA-105N SCH. 60	---	WELDED	SHELL

11. Supports: Skirt YES Lugs ONE Legs --- Other --- Attached WELDED TO SHELL (BOTH) (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: --- (Name of part, item number, S.M.A.'s name and identifying number)

16" O.D. X 4'-4 3/4" 7/8 X 740" D.P. + 3" C.H. INLET GAS PARTICLE FILTER VOL: 6.0147³ WT: 1400 lbs.
NO IMPACT TESTING REQUIRED PER UCS-66 & UCS-68(C)

CERTIFICATE OF SHOP 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. 19595 expires JULY 31, 1993.
Date AUG 26, 91 Co. name WELLS-HALL FAB. & CONST. LTD. Signed Bob Jorgensen (Manufacturer) (Representative)
CERTIFICATE OF SHOP INSPECTION
Vessel constructed by WELLS-HALL FABRICATION & CONSTRUCTION LTD. at EDMONTON, 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 THE GOVERNMENT OF ALBERTA,
have inspected the component described in this Manufacturer's Data Report on August 26, 91, 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 9/10/91 Signed [Signature] (Authorized Inspector) Commissions ALBERTA (Nat'l Board (ind. endorsement), State, Prov. and No.)