



Location Name:	ANSELL	LSD:	07-27-051-19 W5M
Jur #:	A0593706	Equipment/Tag No.	66177833
Equipment Description:	GLYCOL FLASH SEPARATOR		
Manufacturer:	ALCO GAS & OIL		
Serial Number:	2011-8230-01	CRN:	R-2294.213
Shell MAWP:	1724	KPA Shell Design Temp:	93 °C
Tube MAWP:		KPA Tube Design Temp:	°C
Shell Material:	SA-106-B	Head Material:	SA-516-70
Shell Thickness:	9.53	mm Head Thickness:	7.11 mm
Corrosion Allowance:	1.5875	mm Date Built:	2011
Size:	324	mm Pipe / Rolled Plate:	
RT:	2	Streamline Report #:	STL-19-0246-DMS 27

NOTES:

281940

250 psi at 200 °F
Max. Allowable Working Pressure

0 psi at 200 °F
Max. Allowable External Working Pressure

-20 °F at 250 psi
Minimum Design Metal Temperature

2011-8230-01
Serial Number

A No. 583706

CRN -2294.213

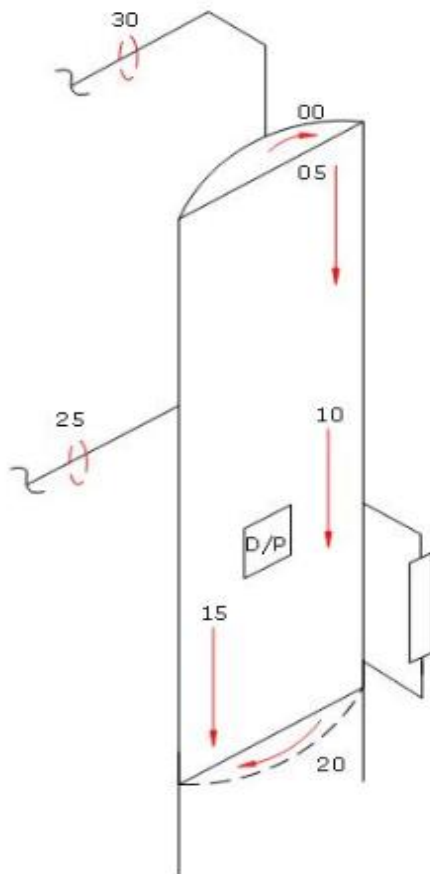
NAME GLYCOL FLASH SEPARATOR

HEAD SA-516-70

SHELL SA-106-B

0.280 in C.A. 0.0625 in

0.375 in HYDRO 325





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 27

Inspector: DYLAN SUNDQUIST

LSD: 07-27-051-19 W5M	Area: ANSELL	Location: GAS PLANT
Jur #: A0593706	Tag Number: 66177833	Vessel Name: GLYCOL FLASH SEPARATOR
CRN: R-2294.213	Year Built: 2011	Serial Number: 2011-8230-01
RT: 2	Vessel CA: 1.588 mm	Manufacturer: ALCO GAS & OIL
	Shell MAWP: 1724 KPA	Tube MAWP: KPA
	MAWT: 93 °C	MAWT: °C
		Pipe/Plate

CML Description		Previous	Current		Flange ANSI:		Material:	SA-516-70	
00 HEAD		2014	2019	Flag	CA	Nominal	T Min	STCR mm/yr	LTCR mm/yr
Shape: Ellipsoidal	Min	9.30	9.32	5.525	1.588	7.112		0.000	0.000
OD: 323.85	Avg	9.42	9.47						
Spec: ASME VIII Div.1	Comments:							Remaining Life:	Retirement Date:

CML Description		Previous	Current		Flange ANSI:		Material:	SA-106-B	
05 SHELL		2014	2019	Flag	CA	Nominal	T Min	STCR mm/yr	LTCR mm/yr
Shape: Cylindrical	Min	9.63	9.55	7.938	1.588	9.525		0.016	0.000
OD: 323.85	Avg	9.75	10.21						
Spec: ASME VIII Div.1	Comments:							Remaining Life:	Retirement Date:

CML Description		Previous	Current		Flange ANSI:		Material:	SA-106-B	
10 SHELL		2014	2019	Flag	CA	Nominal	T Min	STCR mm/yr	LTCR mm/yr
Shape: Cylindrical	Min	9.68	9.58	7.938	1.588	9.525		0.021	0.000
OD: 323.85	Avg	10.03	10.16						
Spec: ASME VIII Div.1	Comments:							Remaining Life:	Retirement Date:

CML Description		Previous	Current		Flange ANSI:		Material:	SA-106-B	
15 SHELL		2014	2019	Flag	CA	Nominal	T Min	STCR mm/yr	LTCR mm/yr
Shape: Cylindrical	Min	9.68	9.73	7.938	1.588	9.525		0.000	0.000
OD: 323.85	Avg	9.91	9.83						
Spec: ASME VIII Div.1	Comments:							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 27

Inspector: DYLAN SUNDQUIST

LSD: 07-27-051-19 W5M	Area: ANSELL	Location: GAS PLANT
Jur #: A0593706	Tag Number: 66177833	Vessel Name: GLYCOL FLASH SEPARATOR
CRN: R-2294.213	Year Built: 2011	Serial Number: 2011-8230-01
RT: 2	Vessel CA: 1.588 mm	Manufacturer: ALCO GAS & OIL
	Shell MAWP: 1724 KPA	Tube MAWP: KPA
	MAWT: 93 °C	MAWT: °C
		Pipe/Plate 0

CML Description		Previous	Current		Flange ANSI:		Material: SA-516-70		
20 HEAD		2014	2019	Flag	CA	Nominal	T Min	STCR mm/yr	LTCR mm/yr
Shape: Ellipsoidal	Min	8.86	9.17	5.525	1.588	7.112		0.000	0.000
OD: 323.85	Avg	9.19	9.27						
Spec: ASME VIII Div.1	Comments:							Remaining Life:	Retirement Date:

CML Description		Previous	Current		Flange ANSI:		Material: SA-106-B		
25 PIPING		2014	2019	Flag	CA	Nominal	T Min	STCR mm/yr	LTCR mm/yr
Shape: 360° Circ	Min	5.51	5.33	4.845	0.692	5.537		0.035	0.025
OD: 60.325	Avg	5.64	5.59						
Spec: ASME B31.3	Comments:	ASSUMED NOMINAL						Remaining Life:	Retirement Date:

CML Description		Previous	Current		Flange ANSI:		Material: SA-106-B		
30 PIPING		2014	2019	Flag	CA	Nominal	T Min	STCR mm/yr	LTCR mm/yr
Shape: 360° Circ	Min	5.59	5.56	4.845	0.692	5.537		0.005	0.000
OD: 60.325	Avg	5.84	5.79						
Spec: ASME B31.3	Comments:	ASSUMED NOMINAL						Remaining Life:	Retirement Date:

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

A583706

1. Manufactured and certified by Alco Gas & Oil Production Equipment LTD. 5203 75th St., Edmonton, Alberta T6E 5S5 Canada
(Name and address of manufacturer)
2. Manufactured for Husky Oil Operations Ltd - Box 4490 Station D, Calgary, AB T2P 3G7
(Name and address of purchaser)
3. Location of installation EDSON, AB
(Name and address)

4. Type: VERTICAL 2011-8230-01 R-2294.213 D-2003-6970-01-001/1R1 N/A 2011
(Horiz. or vert., tank) (Mfrs 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, Division 1 2010 EDITION
to _____ Year _____

6. Shell: SA-106B 3/8" 1/16" 12" 5' 0"SM/SM
(Material spec. number, grade) (Nominal thickness) (Corr. allow.) (Inner diameter) (Length (overall))
7. Seams: SEAMLESS N/A 100% N/A N/A TYPE 1 SPOT 70% 1
Long. (Welded, Dbl., Sngl., Lap, Butt) R.T. (Spot or Full) Eff. (%) H.T. Temp. (° F) Time (hr) Girth (Welded, Dbl., Sngl., Lap, Butt) R.T. [Spot, or Full] Eff. (%) No. of Courses
8. Heads: (a) Matl. SA-516Gr.70MT (b) Matl. SA-516Gr.70MT
(Spec. No., Grade) (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	0.280"	1/16"	N/A	N/A	2:1	N/A	N/A	N/A	Concave
(b) BOTTOM	0.280"	1/16"	N/A	N/A	2:1	N/A	N/A	N/A	Concave

If removable, bolts used (describe other fastenings) N/A
9. MAWP: 250 PSI 0 PSI at max. temp. 200°F 200°F
(internal) (external) (internal) (external)
Min. design metal temp. -20°F at 250 PSI Hydro., pneu., or comb. test pressure Hydrostatic 325 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	2"	TOL	SA105N	CL6000	N/A	UW16.1(a)	SHELL
GAS OUTLET	1	2"	TOL	SA105N	CL6000	N/A	UW16.1(a)	TOP HEAD
LIQUID OUT	1	1"	COUPLING	SA105N	CL6000	N/A	UW16.1(c)	SHELL
LC / INSP	1	2.375"	TOL	SA105N	CL6000	N/A	UW16.1(a)	SHELL
LG / TI / INSP	4	1.050"	TOL	SA105N	CL6000	N/A	UW16.1(a)	SHELL
PRESS IND	1	1/2"	TOL	SA105N	CL6000	N/A	UW16.1(a)	SHELL
INSPECTION	1	1.050"	TOL	SA105N	CL6000	N/A	UW16.1(a)	TOP HEAD
H.C. SKIMMER	1	1"	TOL	SA105N	CL6000	N/A	UW16.1(a)	SHELL

11. Supports: Skirt Yes Lugs NO Legs NO Other ----- Attached Welded To Bottom Head
(Yes or no) (No.) (No.) (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
(Name of part, item number, Mfr's. name and identifying stamp)

NO-IMPACT TEST EXEMPT PER UG 20 (f), TOL & COUPLING PER UCS-66(c) / RT PER UW-11(a)5(b)
PSV LOCATED IN PIPING / GLYCOL FLASH TANK CAPACITY 4.3 FT³
AS BUILT DRAWING D-2011-8230-01-001/001 R0 / HYDROTESTED HORIZONTALLY

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. <u>14259</u> expires <u>October 7, 2013</u>	
Date <u>AUG. 4, 2011</u> Co. name <u>Alco Gas & Oil Production Equipment LTD.</u> (Manufacturer)	Signed <u>[Signature]</u> (Representative)
CERTIFICATE OF SHOP/FIELD INSPECTION	
Vessel constructed by <u>Alco Gas & Oil Production Equipment LTD.</u> at <u>5203 75th St., Edmonton, Alberta T6E 5S5 Canada</u>	
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 <u>ALBERTA</u> and employed by <u>ABSA</u> have inspected	
the component described in this Manufacturer's Data Report on <u>AUGUST 4, 2011</u> , 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 <u>04 AUG 2011</u> Signed <u>[Signature]</u> (Authorized Inspector)	Commissions <u>AB 136 NB 12304 A, B, N</u> (Nat'l Board (incl. endorsements) State, Prov. and No.)