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**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 Enerflex Ltd., 10121 Barlow Trail NE, Calgary, Alberta, T3J 3C6  
(Name and address of manufacturer)
2. Manufactured for Husky Oil Operations Ltd., Box 4490, Stn. D Calgary Alberta, T2P 3G7  
(Name and address of purchaser)
3. Location of installation McMullen TCP, LSD: 03-35-078-25 W4  
(Name and address)
4. Type Vertical 31834213 V2134.213 31833-V0404 Rev.4 --- 2010  
(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 specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 2007  
Year
- to 2009  
(Addenda (date))
6. Shell: SA-106B 0.593" 0.0625" 1' - 6.814" 5' - 6" S/S  
(Material spec. number, grade) (Nominal thickness) (Corr. allow.) (Inner diameter) (Length (overall))
7. Seams: Seamless Pipe --- 1.0 --- Type 1 Spot 0.70 1  
(Long. (welded, dbl., singl., lap, butt)) (R.T. (spot or full)) (Eff., %) (H.T. temp.) (Time, hr) (Girth (welded, dbl., singl., 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)	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	0.4375"	0.0625"	---	---	SE 2:1	---	---	---	Concave
(b)	Bottom	0.4375"	0.0625"	---	---	SE 2:1	---	---	---	Concave

If removable, bolts used (describe other fastenings) ---(Material spec. number, grade, size, number)

9. MAWP 655 PSIG --- at max. temp. 300°F  
(Internal) (External)
- Min. design metal temp. -20°F at 655 PSIG. Hydro., pneu., or comb. test pressure 852 PSIG  
(Internal) (External)
- Proof Test ---

10. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain)	Number	Diameter or Size	Type	Material	Nominal Thickness	Reinforcement Material	How Attached	Location
			SEE	ATTACHED	U4	FORM		

11. Supports: Skirt Yes Lugs 2 Legs --- Other --- Attached Head & Welded  
(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: ---

(Name of part, item number, Manufacturer's name and identifying stamp)

Vessel Type: Stage #2 Suction Scrubber Construction Drawing: 31834-V-0404 Rev.4

Impact testing: exempt, per UG-20(f)(1-5), UCS-66(c) Volume: 14 Cu. Ft.

Relief Valve installed on piping in accordance with UG-125

2 - 3" CL300 Hub Flange RF SA-105N Studs: 3/4"Ø 4 1/2" Lg. SA-193-B7 Qty. 16, Nuts: 3/4"Ø SA-194-2H Qty. 32

1 - 1 1/2" CL300 Hub Flange RF SA-105N Studs: 3/4"Ø 4" Lg. SA-193-B7 Qty. 4, Nuts: 3/4"Ø SA-194-2H Qty. 8

2 - 2" CL300 Hub Flange RF SA-105N Studs: 5/8"Ø 4" Lg. SA-193-B7 Qty. 24, Nuts: 5/8"Ø SA-194-2H Qty. 48

2 - 2" CL300 RFBLL SA-105N Studs: 5/8"Ø 4" Lg. SA-193-B7 Qty. 16, Nuts: 5/8"Ø SA-194-2H Qty. 32

**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 33.658 expires November 26, 2011.

Date 22 Sept 2010 Co. name Enerflex Ltd. Signed demadi  
(Manufacturer) (Representative)

**CERTIFICATE OF SHOP/FIELD INSPECTION**

Vessel constructed by Enerflex Ltd. at Calgary, Alberta, Canada  
 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 SEP 23 2010 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 SEP 23 2010 Signed ALTA #58 Commissions ---  
(Authorized Inspector) (National Board (incl. endorsements), State, Province and Number)

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(Name and address of Manufacturer)

2. Manufactured for Husky Oil Operations Ltd., Box 4490, Stn. D Calgary Alberta, T2P 3G7  
(Name and address of Purchaser)

3. Location of Installation McMullen TCP, LSD: 03-35-078--25 W4  
(Name and address)

4. Type: Vertical Stage #2 Suction Scrubber 31834213  
(Horizontal, vertical, or sphere) (Tank, separator, heat exch., etc.) (Manufacturers serial Number)

V2134.213 31833-V0404 Rev.4 — 2010  
(CRN) (Drawing Number) (National Board, Number) (Year built)

Certificate of Authorization: Type "U" No. 33,658 Expires November 26, 2011

Date 22 Sept 2010 Name Enerflex Ltd. Signed *[Signature]*  
(Manufacturer) (Representative)

Date SEP 23 2010 Name *[Signature]* Commissions ALTA #58  
(Authorized Inspector) (National Board (incl. endorsements), State, Province and Number)