

A0500740 - SEPARATOR DATA REPORT - JAN 2004

Canadian Natural Resources Limited
Production - Facilities Engineering
A0500740 Horizontal Separator Manufacturers Data
Report

1060-04

Content Date Range: 1/26/2004 to 1/26/2004

Vessel Integrity

Inspection Data

Open: 1/25/2007 Close:

CC+2 0P P

Vital: Yes
Original: Yes
Confidential: No



00759382

1. Manufactured and certified by Opasco Energy Industries Ltd., 2601 Centre Ave East, Calgary, AB T2A 2L1
 (Name and address of manufacturer)
 2. Manufactured for Anadarko Canada Ltd. 425 - 1st St. S.W., Box 2595 STN. M Calgary, AB T2P 4V4
 (Name and address of purchaser)
 3. Location of installation B.C. Stock Unit CYPRESS b-29-K/94-815
 (Name and address)
 Type Horiz., Separator 01-3991-1 R5702.21 V-03-3991-2576 R.2 N/A 2004
 (Horiz or vert. tank) (Mfr's serial No.) (CRN) (Drawing No.) (Nat'l Bld No.) (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 ASME Rules, Section VIII, Division 1 2001
 Year
 to 2002 N/A N/A
 Addenda (date) Code Case Nos. Special service per UG-1 20(d)

6. Shell: SA-516-70N 2.25" .125" 4'-6" 20'-0"
 Mat'l (Spec. No., Grade) Nominal Thk. (in.) Corr. Allow. (in.) Diam. I.D. (ft. & in.) Length (overall) (ft. & in.)
 7. Seams: Type 1 Full 100% 1150 2.25 Type 1 *Full 2
 Long (VWelded 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, Partial or Full) No. of Courses

8. Heads: (a) Mat'l SA-516-70N (b) Mat'l 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 Pres (Con c/Co nv)
(a)	<u>Both Ends</u>	<u>2.1875"</u>	<u>0.125"</u>			<u>2:1</u>				<u>Concave</u>
(b)										

if removable, bolts used (describe other fasteners) _____
 (Mat'l Spec. No., Gr., Size, No.) _____ °F

9. MAWP 1407 psi at max. temp 150 °F
 Min. Design Metal Temp. **20 °F at 1407 Psi Hydro., pneu., or comb. test 2111 psi.

10. Nozzles, Inspection and safety valve openings:

Purpose (Inlet, Outlet, Drain)	No.	Diam. or Size	Type	Mat'l.	Nom. Thk.	Reinforcement Mat'l	How Attached	Location
<u>Inlet/Outlet</u>	<u>2</u>	<u>6"</u>	<u>CI 600 RFWN</u>	<u>SA-333-6/SA-105N</u>	<u>.864"</u>	<u>SA-516-70N</u>	<u>Fig. UW-16.1(h)</u>	
<u>Manway</u>	<u>1</u>	<u>24"</u>	<u>CI 600 RFWN</u>	<u>SA-516-70N/SA-105N</u>	<u>1"</u>	<u>SA-516-70N</u>	<u>Fig. UW-16.1(h)</u>	
<u>BOOT</u>	<u>1</u>	<u>24"</u>	<u>RLD PLATE</u>	<u>SA-516-70N</u>	<u>1"</u>	<u>SA-516-70N</u>	<u>Fig. UW-16.1(h)</u>	
<u>HCD</u>	<u>1</u>	<u>4"</u>	<u>CI 600 RFWN</u>	<u>SA-333-Gr. 6/SA-105N</u>	<u>.674"</u>	<u>SA-516-70N</u>	<u>Fig. UW-16.1(h)</u>	
<u>LSL</u>	<u>1</u>	<u>3"</u>	<u>CI 600 RFWN</u>	<u>SA-333-Gr. 6/SA-105N</u>	<u>.600"</u>	<u>Integral</u>	<u>Fig. UW-16.1(c)</u>	
<u>PSV</u>	<u>1</u>	<u>2.5"</u>	<u>CI 600 RFWN</u>	<u>SA-333-Gr. 6/SA-105N</u>	<u>.552"</u>	<u>Integral</u>	<u>Fig. UW-16.1(c)</u>	
<u>WD/DC/TV/PG/SP/BC/PI/PTDR</u>	<u>11</u>	<u>2"</u>	<u>CI 600 RFWN</u>	<u>SA-106B/SA-105N</u>	<u>.343"</u>	<u>Integral</u>	<u>Fig. UW-16.1(c)</u>	
<u>LSHH</u>	<u>1</u>	<u>3"</u>	<u>CI 600 RFWN</u>	<u>SA-333-6/SA-105N</u>	<u>.600"</u>	<u>SA-516-70N</u>	<u>Fig. UW-16.1(h)</u>	

11. Supports: Skirt NO Lugs 2 Legs 2 Other _____ Attached Either End Welded
 (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:

Impact Testing: **Required as per UCS-66(a) and UCS-67(a) Radiography per: *As per UW-11(a) and UW-51
 Tag No.: V-110 Volume: 380 Cu. ft. (10.76 Cu. M)
 A No: _____

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. 21,356 expires July 21, 2004
 Date: January 26, 2004 Co. Name Opasco Energy Industries Ltd. Signed _____
 (mm/dd/yy) (Manufacturer) (Representative)

CERTIFICATE OF SHOP INSPECTION

Vessel constructed by Opasco Energy Industries 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, Alberta Boilers Safety Association
 have inspected the component described in the Manufacturer's Data Report on 01/26/04, 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 the 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 January 26, 2004 Signed J. Reynolds Commissions Alberta AB-128-A
 (mm/dd/yy) (Authorized Inspector) (Nat'l Bld (incl. endorsements), State, Prov and No.)

CERTIFIED BY



CALGARY, ALBERTA, CAN.

MAWRP 1407 PSINAT 150 °F

MDMI 20 °FAT 1407 PS.I.

SERIAL # 01-0991-1 YEARBUILT 2007

C.R.N. R-5702-21 TAG# V-110

W VESSEL TYPE: SEPARATOR CA 0125H

EST 100% SH. WT: 225H

NET HD. WT: 225H MIN 2187H

PROV. REG. (0000)740