

1060-04

Canadian Natural Resources Limited
Production - Facilities Engineering
A227029 LPG Storage Vessel Inspection

Content Date Range: 6/21/2004 to

Vessel Integrity

Inspection Data

Open: 8/30/2004 Close:

Vital: Yes
Original: Yes
Confidential: No

CC+2

P



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A227029 LPG Storage Vessel Inspection

1 0 6 0 0 4

ASBT

A 227029

AB-40 (Side A) 900P
Edition 7-1, Revision 1.0 Date 22.03.12

(A) #: 227029

OWNER ID NO.: 227029

BOILER AND PRESSURE VESSELS REPAIR OR ALTERATION REPORT

Repair Procedure submitted to Alberta Boilers Safety Association Yes No Partial Final

1. Name and Address of Organisation doing Repair/Alteration: J.C. Ingwinion & Associates Ltd. 590 105 Box 1125
1-780-944-6711 AQP Cert. No. & Expiry Date: AQP-1246

Location of Installation: 600 BROADWAY UNIT # 1204 OUTRAGE DATE: 22.08.2003

2. Name of Owner: Domestic Gas Services

Address: 238-27-17 st

3. Boiler/Pressure Vessel Description: LP Gas Storage Cylinder CRN 249962314

Manufacturer's Name: Welding Shop Ltd. Serial No: 273944

4. Design Conditions: RT-2 Code U2 121A Bulk 185

a) Pressure Vessel/Boiler Shell: Max. Allowable Working Pres. 1740 kPa Min/Max Design Temp. 46°C

b) Pressure Vessel Tank/Jacket: Max. Allowable Working Pres. N/A Min/Max Design Temp. N/A

5. Repair/Alter. Description of Work: Step by step description of repair/alteration method, continue over (under item 1)) or attach additional sheets as needed.

4 TUBES WERE REPAIRED FROM CORROSION FROM COAL-DUST TO
INSURE THAT A SAFE JOB IS DONE. ALL WELDING DONE BY
AND ON SCHEDULE WITH NO DELAYS. SAMPLED AT THE TIME
ALL TUBES ARE SAFE AND WELDING WAS DONE CORRECT

6. Material used in repair and any base material welded on:

Item	Mat'l Spec.	Thickness (Sch)	Diameter	Item	Mat'l Spec.	Thickness (Sch)	Diameter
Shell/Drums	<u>N/A</u>	<u>19.75mm</u>	<u>2793mm</u>	Heads/Ends	<u>SA-516-B</u>	<u>19.75mm</u>	<u>2793mm</u>
Tubing	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	Tubes	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Nozzles	<u>N/A</u>	<u>2mm</u>	<u>5"</u>	Flanges/Fittings	<u>304 SS</u>	<u>18"</u>	<u>N/A</u>

7. Welding Procedure / Prov. Reg. No. 1190.1 Owners W.P.S. No's Used

8. Heat Treatment: Bake Out (Temp/Time) Preheat Temp Post Weld HT (Temp/Time)

9. Non Destructive Examination (Specify type and extent):
U.T. Thickness 4 spots A sample
ASME code of inspection ASME and ASME approved ASME

The information provided is necessary only for the administration of the program as required by the Alberta Safety Codes Act and Regulations or the Boiler Division

OWNER'S PRESSURE VESSEL INSPECTION REPORT

(A) Number: 22-2029 AD-1128
 Owners Name: Amgas Gas Services Owners Vessel Code or Number: Am Gas 4936, 234
 Owners Address: P-32-34-17 Plant/Unit: Trax Gas Plant

Vessel Description: LP Gas Storage Vessel Horizontal Vertical Other Other
 Servicer: BP Air Oil Sweet Gas Chlorine
 NH3 LPG WH H2S Sour Gas Other: Chlorine
 Vessel Has Manway: Yes No Vessel Mtg: Horizontal Other Ser. Ser.#: 27344/A

VESSEL DATA		SAFETY VALVE DATA			
MAWP	I.D. NO.	SETTING	CAPACITY	UNITS	LOCATION
113.51-08	1734	250 PSY	11.356	AM3	TOP OF VESSEL
113.51-08	1734	"	"	PSI	TOP OF VESSEL
113.51-08	1734	"	"	PSI	TOP OF VESSEL
113.51-08	1734	"	"	PSI	TOP OF VESSEL
113.51-08	1734	"	"	PSI	TOP OF VESSEL
113.51-08	1734	"	"	PSI	TOP OF VESSEL
113.51-08	1734	"	"	PSI	TOP OF VESSEL
113.51-08	1734	"	"	PSI	TOP OF VESSEL
113.51-08	1734	"	"	PSI	TOP OF VESSEL
113.51-08	1734	"	"	PSI	TOP OF VESSEL

Please record the safety valve data for each data of the pressure vessel as applicable, i.e. heat exchanger shell side and tube side

Examination Methods (Type and Extent):

Visual inspection of safety valves only

Surface Area of Vessel: 1079 M²
Required Capacity: 16720 CM AM3
Actual Capacity: 45340 CM AM3

Pressure Test: PSY on shell PSY on tube side
 Type of Pressure Test: Hydrostatic Pneumatic Sensitive Leak

Remarks: ROSTER UP TO Chlorine Provision

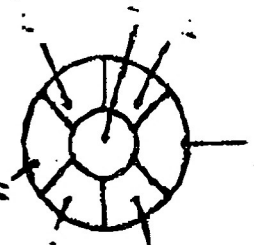
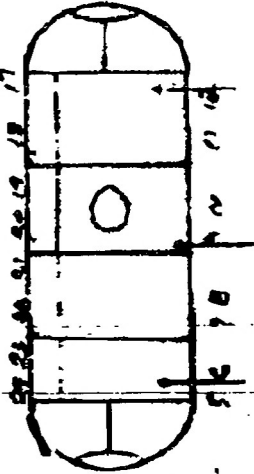
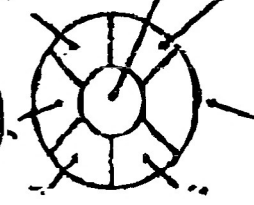
Status: Suitable for Continued Service: Yes No
 Repairs Required: Yes No
 Repairs Completed (attach AB-40): Yes No

Vessel Inspection Date: 2007.17.02 Suggested Re-inspection Date: 2012

Name of Inspector: Basim Company Name: J.C. International & Flow Ltd.
 Signature: [Signature] Date: _____

Parasonic Survey Record

Tag #:	Description:	Serial #:	Equipment #:	Inspector:	Date:
	APR 20 2004	227224	227224	10/10/04	10/10/04
UTM-501		Machine Parameters: YES			
Start Material		19.76 mm			
Blend Material		R. 62 mm			



Point 1/1

Point 2/2

Point	Time	Temp	Humidity	Notes
1	22:56	22.5	61	
2	22:58	22.8	61	
3	22:59	22.6	61	
4	23:00	22.6	61	
5	23:01	22.5	61	
6	23:02	22.3	61	
7	23:03	22.4	61	
8	23:04	22.2	61	
9	23:05	22.3	61	
10	23:06	22.3	61	
11	23:07	22.5	61	
12	23:08	22.2	61	
13	23:09	22.4	61	
14	23:10	22.4	61	
15	23:11	22.4	61	

This confirms that the above information is correct.

INS. Technician: David S. Smith - 10/10/04 - 10/10/04 - 10/10/04

