

**Canadian Natural Resources Limited
GENERAL PRESSURE VESSEL INFORMATION**

Job # 10.112195

District: Fort St. John BC.	Skid No.
Facility: Jedney	Location (LSD): A-62-E-94-G-8
Vessel Name Equipment Number: Sour Condensate Bullet	
Orientation: Horizontal	
Status: In Service	Regulatory Inspection

PRESSURE VESSEL NAMEPLATE DATA

"A" or "G" or "S" (Sask.) or BC Registration Number. A0242824		CRN Number: P7743.1	
Vessel serial number: 88-1032		Size: 60 in. X 16 ft.	
Shell thickness: 15.8mm		Shell material: SA 516-70N	
Head thickness: 15.4mm		Head material: SA516-70N	
Tube wall thickness:		Tube material:	
Tube diameter:		Tube length:	
Channel thickness:		Channel material:	
Design pressure	Shell: 225 PSI	Operating pressure	Shell: 0 – 200 PSI
	Tubes:		Tubes:
Design Temp.	Shell: 100 Deg F.	Operating temperature	Shell: 0 – 250 Deg F.
	Tubes:		Tubes:
X-ray: RT 1		Heat treatment: HT	
Code parameters: ASME VIII, Div 1		Coated: yes	
Manufacturer: I.P. Constructors Ltd.		Year built: 1988	
Corrosion allowance: 3.2mm		Manway: yes	

PRESSURE SAFETY VALVE NAME PLATE DATA

PSV Tag #	Manufacture	Model #	Serial #	Set Pressure (kPa)	Capacity (scfm)	Service Date
	Crosby	JOS-15A	SE13338-1	155 PSI	516	9, 2012
CRN #	Service By	Block Valve	Location	Size	Code Stamp	
	Unified valve	No	Top shell	1" x 2"	UV/NB	

SERVICE CONDITIONS-INDICATE ALL THAT APPLY

Sweet	Sour X	Oil	Gas X	Water
Amine	LPG	Condensate X	Air	Glycol

Other (Describe):

Inspection Interval _____ **PSV Service Interval** _____

(Determined by MIC in conjunction with Chief Inspector following guidelines of CNRL's Owner-User Inspection Program)

Reports reviewed and accepted by:

Mechanical Integrity Coordinator _____ **Date** _____

Fill out all forms as completely as possible. All information is important! Use back of sheets to record additional information or sketch if required.
Copy of report to be filed by MIC at site, and copy sent to Chief Inspector

External Inspection Items	G	F	P	N/A	Comments
Insulation Verify sealed around manways, nozzles, no damage present, and there is no egress of moisture.				X	Vessel not insulated.
External Condition Assess paint condition, areas peeling, record any corrosion, damage, etc (record location, size and depth of corrosion or damage)	X				Paint in good condition – no exposed metal.
Leakage Record any leakage at flanges, threaded joints, weep holes on repads, etc.	X				No leaks observed.
Saddle/skirt Assess condition of paint, fire protection, concrete. Look for corrosion, buckling, dents, etc. Look at vessel surface area near supports. Verify no signs of leakage at attachment to vessel and attachment welds are acceptable. Ground wire attached?	X				Saddle: bolted directly to skid building. No buckling or dents. No corrosion at attachment welds to vessel Ground wire attached to vessel.
Anchor Bolts Hammer tap to ensure secure. Look for cracking in treads or signs of deformation.	X				Securely fastened – no deformation.
Concrete foundation Check for cracks, spalling, etc.				X	
Ladder / Platform Describe general condition, ensure support is secure to vessel, describe any hazards.				X	
Nozzle Assess paint, look for leakage, and ensure stud threads are fully engaged. Record any damage, deflection, etc. Are nozzles gusseted?	X				Flanged and threaded nozzle joints are fully engaged. No leaks, no damage or deflection. Nozzles are not gusseted.
Gauges Ensure gauges are visible, working, no leakage, and suitable for range of MAWP/Temp.	X				Clean- no leaks – within operational range for service. Pressure gauge 0 – 200 PSI//temperature gauge 0 – 250 Deg F.
External Piping Ensure pipe is well supported. All clamps, supports, shoes, etc. in place. Look for evidence of structural overload, deflection, etc. Paint condition, external corrosion?	X				Well supported – all clamps and supports are in place. No structural overloads or deflection. Paint in good condition – no exposed metal.
Valving Ensure no leaks are visible. Valves are properly supported and chained if necessary.	X				No leaks are visible- valves are supported properly.
PSV Ensure PSV is set at pressure at or below that of vessel.	X				Top shell Removed for service.
NDE methods Was UT/ MPI done on vessel (MI coordinator to review results)				X	
Other					
<p>Recommendations or corrective actions : Vessel is Fit for Service or describe corrective actions required) (MIC to review corrective actions with Operations, discuss with Chief Inspector where necessary, and get remedial action implemented) Recommendations: No recommendations. Summary: Vessel is fit for service.</p>					

Internal Inspection Items	G	F	P	N/A	Comments
Coating Assess coating. Describe area coated, general condition of coating.	X				No chipped or peeling coating – dry film thickness of coating averaged 12- 14 mils.
Anodes. How many, type, condition. % consumed. Are they being replaced?				X	No anodes in vessel
Internal Piping Is there any? If so, carbon or stainless steel. Describe condition, dents, corrosion, erosion, etc. Ensure supports are secure and any bolts are suitable for future use.	X				Pipe – in place and secure – no deflections. Support clamp bolt missing.
Trays How many? Type of material. Are valves in place. Check for erosion/ corrosion; wear on tray valve legs. Cleanliness?				X	None.
Baffles, deflector plates, etc. If present, describe condition. Look closely at welds attached to vessel wall.	X				Weir – welded to shell – no mechanical damage or dents. Vortex breaker bolted securely to shell bottom – no obstructions.
Top Head Note all corrosion, erosion or mechanical damage. (If vessel is horizontal identify direction of this head)	X				North head – No mechanical damage. Coating bonded to head – no exposed metal – no mechanical damage.
Bottom Head Note all corrosion, erosion or mechanical damage. (If vessel is horizontal identify direction of this head)	X				South head – No mechanical damage or dents. No corrosion or erosion.
Shell Sections Record number of shell sections. Record location, size and depth of all erosion, corrosion or mechanical damage. Describe general condition. If any corrosion greater than corrosion allowance is observed in either shell or head, discuss with Chief Inspector before closing vessel.	X				Shell in good condition –No mechanical damage. No corrosion or mechanical damage. Nozzles are clean - no obstructions – probes are clean – no damages. Man way – no chipped or peeling coating.
Demister pad Is it in place? Is it clean? If any corrosion is apparent in vessel, lift pad and check top head for corrosion.				X	
Welds Inspect all welds, including attachment welds. Record all service-related damages and if there is any discuss with Chief Inspector before closing.	X				Over all welds are in good condition – head to shell weld has no corrosion – no erosion or pitting. Attachment welds are in good condition no corrosion or erosion.
Repairs Required. If yes, ensure procedure and copy of AB 40 is on file, and one sent to local ABSA, and Chief Inspector				X	
NDE Was any NDE done. (MI coordinator to review results)				X	
<p>Recommendations or corrective actions : Vessel is Fit for Service or describe corrective actions required) (MIC to review corrective actions with Operations, discuss with Chief Inspector where necessary, and get remedial action implemented) Recommendations: No recommendations. Summary: Vessel in good overall condition, Visual external and internal inspection performed on vessel. No visual defects observed.</p> <p>Vessel is fit for service.</p>					

Inspected By: Gerry Avery

Date: September 14, 2012

Photo Table



LSD

Vessel data plate



Temperature gauge



Pressure gauge



Vessel overview



Man way



Internal overview



Man way attachment weld coated



Missing bolt on pipe support



Vessel heat and pipe nozzle attachment



Vortex breaker



Weir and pipe attachment



Shell tee weld



probe