

Pressure Vessel Static Information

Insp. Comp: Summit Inspection Services Ltd		District: Slave Lake		Field: BRINTNELL 1362	
Location: 12-09-081-22W4 BR BATTERY		Unit/Skid: PV-610		LSD: 12-09-081-22W4	
Jurisdiction #: A0403457		Alt. Jur #:		Equip Tag #: PV-620	
Serial #: 97015-2-30		CRN #: L0015.2		Year Built: 1998	
Manufacturer: Resource Constructors (Canada) Inc.			Equipment Description: TREATER		
Status: In Service		Equip Type: Vessel		Service: Sour	
Shell MAWP: 517.11 kPa @ 148.8900 C		Volume: bbl		Code Stamp: <input type="radio"/> Yes <input checked="" type="radio"/> No	
Tube MAWP: kPa @ C		Length:		Insulated: <input checked="" type="radio"/> Yes <input type="radio"/> No	
Shell MDMT: -28.8900 C	RT: RT1	Diameter: 3.05 m OD		PWHT: <input type="radio"/> Yes <input checked="" type="radio"/> No	
Tube MDMT:	Support: Saddle			Manway: <input checked="" type="radio"/> Yes <input type="radio"/> No	
Shell C.A.: C	Shell JE: 1.00	Coated: <input type="radio"/> Yes <input checked="" type="radio"/> No		Clad: <input checked="" type="radio"/> Yes <input type="radio"/> No	
Tube C.A.: mm	Tube JE:	Remote Access: <input type="radio"/> Yes <input checked="" type="radio"/> No			
Dim Text: Horizontal					
Data: New					

Corrosion Monitoring Location (CML) Static Information

Side	TML #	Test PT Name	Material	Nom Thick	Diameter	CORR Allow
S	400	Bottom East Head		12.7 mm	3048 mm OD	1.6 mm
S	405	Upper South Shell (west end)		12.7 mm	3048 mm OD	1.6 mm
S	410	Lower South Shell (west end)		12.7 mm	3048 mm OD	1.6 mm
S	415	Bottom South Shell (center)		12.7 mm	3048 mm OD	1.6 mm
S	420	Bottom Shell (east end)		12.7 mm	3048 mm OD	1.6 mm
S	425	Bottom Shell (west end)		12.7 mm	3048 mm OD	1.6 mm
S	450	4" Outlet Elbow	SA-234-WPB	6.02 mm	114.3 mm OD	1.6 mm
S	460	Bottom of 2" Outlet Pipe	SA-106-B	5.54 mm	60.32 mm OD	1.6 mm
S	470	Bottom of 3" Pipe	SA-106-B	7.62 mm	88.9 mm OD	1.6 mm
S	471	3" Outlet Elbow	SA-234-WPB	7.62 mm	88.9 mm OD	1.6 mm
S	472	Bottom of 3" Outlet Pipe	SA-106-B	7.62 mm	88.9 mm OD	1.6 mm
S	473	Bottom of 3" Tee	SA-234-WPB	7.62 mm	88.9 mm OD	1.6 mm
S	474	3" Outlet Elbow	SA-234-WPB	7.62 mm	88.9 mm OD	1.6 mm
S	475	3" Outlet Elbow	SA-234-WPB	5.49 mm	88.9 mm OD	1.6 mm
S	480	2" Outlet Elbow	SA-234-WPB	3.91 mm	60.32 mm OD	1.6 mm
S	490	3" Inlet Elbow	SA-234-WPB	7.62 mm	88.9 mm OD	1.6 mm
S	492	Bottom of 3" Inlet Pipe	SA-106-B	7.62 mm	88.9 mm OD	1.6 mm
S	494	Bottom of 3" Inlet Pipe	SA-106-B	7.62 mm	88.9 mm OD	1.6 mm

Comment:



PSV Static Data

Tag #:	Serial #: SE-17489-1	CRN: 0G0201.2C
Model No: JLT-JOS-15/A	Capacity: 729	USGPM Set Pressure: 75 psi
Manufacturer: Crosby	Location of PSV: On Vessel	Last Service Date:
Inlet Size: 3.00 in	Inlet Carseal: <input type="radio"/> Yes <input checked="" type="radio"/> No	Conn. Type: Flanged Inlet Block: <input type="radio"/> Yes <input checked="" type="radio"/> No
Outlet Size: 4.00 in	Outlet Carseal: <input type="radio"/> Yes <input checked="" type="radio"/> No	Code Stamp: UV Outlet Block: <input type="radio"/> Yes <input checked="" type="radio"/> No
Service Comp: Apex Valve Services	Out For Service: <input type="radio"/> Yes <input checked="" type="radio"/> No	PSV Side: SHELL
Comment: Meets code requirements, Last PSV service date is February 11, 2013.		



External Inspection Results - VE

External Inspection Complete: 2014-08-11

Item	N/A	Condition	Comment	NCR	Action Item Integrity	Action Item Maintenance
Nameplate	<input type="checkbox"/>	Accept		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Foundation & Supports	<input type="checkbox"/>	Accept		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anchor Bolts	<input type="checkbox"/>	Accept		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grounding	<input type="checkbox"/>	Accept		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insulation Condition	<input type="checkbox"/>	Accept		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PSV	<input type="checkbox"/>	Accept		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shell Heads & Nozzles	<input type="checkbox"/>	Accept		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Metal Surfaces (Paint)	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aux. Equipment	<input type="checkbox"/>	Accept		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cathodic Protection	<input type="checkbox"/>	Accept		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alignment	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flange Connections	<input type="checkbox"/>	Accept	Manway davit arm is single nutted.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pressure Gauge	<input type="checkbox"/>	Accept		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Temperature Gauge	<input type="checkbox"/>	Accept		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sight Glass	<input type="checkbox"/>	Accept		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ladder / Platform	<input type="checkbox"/>	Accept		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leak	<input type="checkbox"/>	No		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Piping From Vessel	<input type="checkbox"/>	Accept		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Previous UT Survey	<input type="checkbox"/>	Pick	Survey Date:	UT Company:		

External Visual Observations

Empty box for external visual observations.

Recommendations

Install a second nut to the manway davit arm



Internal Inspection Results - VI

Internal Inspection Complete: 2014-08-11

Item	N/A	Condition	Comment	NCR	Action Item Integrity	Action Item Maintenance
Shell	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heads	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manway	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gasket Surfaces	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Welds	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Refractory	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heating Coils	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Demister Pad	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vane Pack	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Baffles	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trays	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Filter	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internal Coating	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tubesheet	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tube Bundle	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Internal Visual Observations

Recommendations

Firetube Static Data

Firetube Inspection Complete: 2014-08-11

Diameter:		Nom Thickness:		Bend:	
Length:		Firetube Description:			
Firetube NDE	UT <input type="checkbox"/>	Report #:	MT <input type="checkbox"/>	Report #:	
Performed:	PT <input type="checkbox"/>	Report #:	Other <input type="checkbox"/>	Report #:	

Firetube Inpection Results

Item	N/A	Condition	Comment	NCR	Action Item Integrity	Action Item Maintenance
Burner	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stack	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flange (Throat)	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tube Sheet	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hot Side	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Miter	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Return Bend	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supports	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Butt Welds	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fillet Welds	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Firetube Visual Observations

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Recommendations

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NDE and Final Summary

NDE	UT	<input checked="" type="checkbox"/>	Report #:	UT(SW)	<input type="checkbox"/>	Report #:
Performed:	MT	<input type="checkbox"/>	Report #:	PT	<input type="checkbox"/>	Report #:
	Other	<input type="checkbox"/>	Report #:			
Drawing Found?		<input type="checkbox"/>				

Observations Summary

The vessel appeared to be in good external condition.
 UT corrosion survey was performed on the vessel and associated piping. Please see attached copy of report for inspection details.

Recommendations Summary

Actions Corrected at Time of Inspection

Additional Visual Observations

Any other safety concerns or observations from associated equipment

Possible indications of internal corrosion may be occurring in the bottom of the pipe to a low of .165". Nominal thickness is .218".

Thickness and Remaining Life Evaluation

MUST BE COMPLETED AND RESOLVED WITH CNRL IMMEDIATELY UPON DISCOVERY OF LOW WALL THICKNESS AREAS

Was any thickness measurement location (Nominal WT - Corrosion Allowance)? No

Report #:

Which component(s) were found below (Nominal WT - Corrosion Allowance)?

Components below (Nom - CA)		Components below (Nom - CA)	
	-		
	-		
	-		
	-		
	-		

Component Worksheet:

Component	Low Reading	Calculated T-Min	Reading Below T-Min	Nature Of Pitting	Remaining Life

Notes:

Contact CNRL Integrity Coordinator to discuss above results.

Name Of CNRL Contact:

Date and Time Of Conversation:

Summary/Results Of Conversation:



Crack Evaluation by Magnetic Particle or Alternative Inspection

MUST BE COMPLETED AND RESOLVED WITH CNRL IMMEDIATELY UPON DISCOVERY OF CRACK-LIKE INDICATIONS

Were any indications found to suggest the vessel contained cracks? : No

Report #:

Name Of CNRL Contact:

Date and Time Of Conversation:

Summary/Results Of Conversation:

CNRL Criticality Evaluation

	YES	NO
1. Is the vessel fit-for-sevice? :	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Was the measured thickness less than the calculated minimum required thickness (T-Min) of any component?:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Were MT indications found?:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Was the remaining life less than 6 yrs for sour service vessels or less than 10 yrs for sweet service vessels?:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Were NCR's or Action Items generated as a result of the inspection?:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Were UT readings below (Nominal WT - Corrosion Allowance) found?:	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Information on CNRL Owner User Program - Criticality Designation and Required Review

RED - Vessel Inspection Results are deemed RED if **one** of the following occurred:

- * The measured thickness was less than the calculated minimum required thickness (T-Min) for any component
- * MT Indications were found
- * The remaining life was calculated to be less than 6 years for sour-service or less than 10 years for sweet-service veseeels

RED inspection reports must be signed off by the CNRL Chief Inspector.

YELLOW - Vessel Inspection Results are deemed YELLOW if **one or more** of the following occurred:

- * The vessel was declared NOT fit-for-service by the 3rd Party In-Service PV Inspector
- * NCR's or Action Items were generated as a result of the inspection.
- * UT Readings below (Nominal WT - Corrosion Allowance) were found.

YELLOW inspection reports must be signed off by the CNRL Pressure Equipment Integrity Coordinator

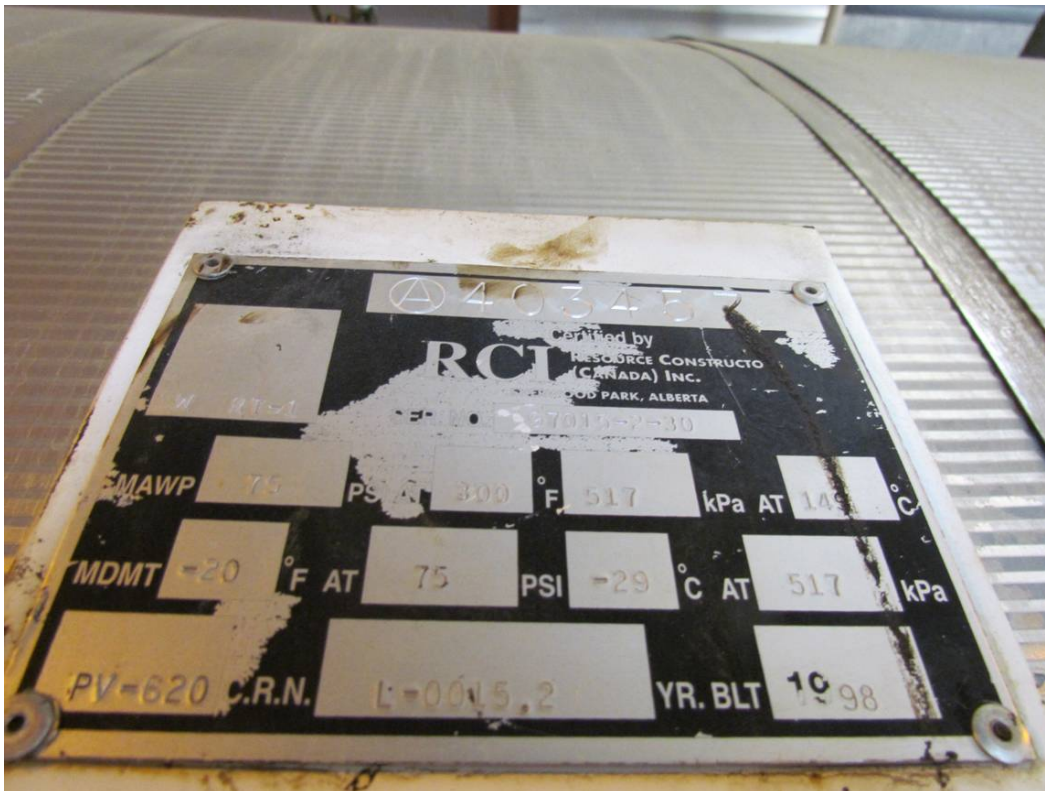
GREEN - Vessel Inspection Results are deemed GREEN if **all** of the following are true:

- * The vessel was declared fit-for-service by the 3rd Party In-Service PV Inspector.
- * UT Readings below (Nominal WT - Corrosion Allowance) were NOT found.
- * MT indications were NOT found.
- * NCR's or Action Items were NOT generated as a result of the VE inspection.

GREEN Inspection reports must be signed off by the 3rd Party In-Service Pressure Vessel Inspector.

Inspection Photographs and Relevant Files

Title:



Description: Vessel nameplate

Inspection Photographs and Relevant Files

Title:



Description: Inside view of vessel

Inspection Photographs and Relevant Files

Title:



Description: Outside view of vessel

Inspection Photographs and Relevant Files

Title:



Description: General view of burner assembly

Inspection Photographs and Relevant Files

Title:



Description: PSV nameplate

Inspection Photographs and Relevant Files

Title:



Description: PSV service tag

Inspection Photographs and Relevant Files



Title:



Description: General view of PSV



Job Information

Vehicle #:	KMs:	Inspector (name): Maria Savulescu		
Time In:	Time Out:	Hrs:	PESL #: 000162	API: 24958
Time In:	Time Out:	Hrs:	Inspector (signature): 	
Personnel 1: Nyssa Moore		CNRL Coordinator (name) :		
Personnel 2: Tyler Cameron		CNRL Coordinator (signature): 		
Billing Info:	-	CNRL Chief Inspector (signature):		
Report ID: CNR-PVI-14-00014-25		Inspector Job Number:		