



A2710237_Name plate_9Sept2014



Field Inspection Report

Client	CNRL		Date of Inspection	September 9, 2014					
Prov. Reg.#	A2710237		Inspection Type	VI, VE, UT, MPI					
Equipment	Group Treater and Firetube		Location	Ralston Oil Battery					
Tag/Equip. #			LSD	05-14-018-10W4M					
Vessel Status	In Service		Comp./Unit #						
Manufacturer	Natco Canada		MAWP / Temp	75 PSIG @ 200 F					
Serial #	L-8-325	CRN #	H 0995.2	MDMT@ Pressure	-5 F @ 75 PSIG				
Corrosion Allowance	0.0625"	Shell Material	SA516-70	Shell Thickness	0.975"				
Year Built	1991	Head Material	SA516-70	Head Thickness	0.598"/0.667"				
Diameter	8' OD	Length		Height		RT	RT-4	HT	
Service	Sour	Next Inspection		Next Insp. Type					
ASME Stamp	Yes	Next Inspection		Next Insp. Type					
PSV Tag #		CRN#		Set Pressure	75 PSIG				
Manufacturer	Consolidated			NB#		ASME Stamp			
Type/Model	1905JC2-X-SG10	Serial	90C3880	Inlet Size	2"				
Capacity	2271 SCFM	Service Company	Unified Valve	Outlet Size	3"				
Service Date	10/08/2013		Next Service Date						
Valve Location	<input type="checkbox"/> On Vessel <input type="checkbox"/> On Piping <input type="checkbox"/> Vents to Flare <input type="checkbox"/> Vents to Atmosphere	Valve Connection	<input type="checkbox"/> Threaded <input type="checkbox"/> Flanged <input type="checkbox"/> Welded	ABSA CODE TYPE					
				Plant		Process			
				Vessel		Special			
PSV Tag #		CRN#		Set Pressure					
Manufacturer		NB#		NB#		ASME Stamp			
Type/Model		Serial #		Inlet Size					
Capacity		Service Company		Outlet Size					
Service Date			Next Service Date						
Valve Location	<input type="checkbox"/> On Vessel <input type="checkbox"/> On Piping <input type="checkbox"/> Vents to Flare <input type="checkbox"/> Vents to Atmosphere	Valve Connection	<input type="checkbox"/> Threaded <input type="checkbox"/> Flanged <input type="checkbox"/> Welded						

Manway: Yes. East head firetube and West head manways opened. Both South shell manways were opened for internal inspection as well.

Background:

PSV: Yes, Located on top of the vessel. Service date and set pressure were acceptable, no restriction between the valve and the vessel.



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Ladders, Stairs, Platforms & Walkways

Corroded or Broken Parts-
Condition of Coating-
Wear of Ladder Rungs & Stair Treads-
Handrails Secure-
Condition of Flooring on Walkways-
Check Tightness of Bolts-
Check for Corrosion-
Additional comments:

Concrete Supports and Foundations

Steel Supports (Skirts, Bracing)
Check for Corrosion-
Check for Buckling & deflection-
Check Vessel Supports for Tightness-
Check Insulation for Deterioration-
Additional Comments:

Nozzles

Check for Distortion-
If Found; Check Surrounding Shell and Seams for cracks-
Check Condition of Connected Piping and Supports-
Check Condition of Weep Holes in re-pads-
Additional comments:

Electrical, Instrumentation & Grounding Equipment

Sept./06 Check General Condition of Associated Electrical Equipment-
Check General Condition of Associated Instrumentation-
Check Grounding Connections-
Additional comments:

Auxiliary Equipment

Check Gauges and Sensor connections for Defects, Damage, Cracks & Vibration-
Check Sight Glasses for defects, Damage, Cracks & Vibration-
Check Condition and Operation of Associated Valves-
Additional comments:

Metal Surfaces

Check for Corroded Areas-
Check for Cracks at Weld Seams and Nozzles-
Check for Blistering at and below liquid Level-

Internals

Inspection conducted -
Check bubble or step trays for condition
Check vane packing for plugging or mechanical damage
Check down-comers, overflow lines.
Check weirs, baffles, mist pads and coils-
Additional Comments:



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Protective: Coatings / Insulation / Cathodic

Check for External Coating Failure-

Check for internal coating –

General Comment's: Group Treater was found to be in good general condition.

External Inspection:

- Name plate was attached and readable.
- External paint was in good condition with no signs of external corrosion noted.
- External insulation was intact and in good shape.
- Vessel is supported securely on saddles welded to the shell and welded to the skid.
- All external nozzles were in good condition, no leaking flanges, gaskets, or threaded connections.
- All bolting hardware was intact and secure.
- Liquid level sight glass was in good shape with no cracks or leaks.
- Temperature and pressure gauges were intact and in good working condition.
- Associated piping was in good shape.
- No deflection or deformation of the shell, heads or nozzles.
- Vessel is grounded to the building and ground cable was in good shape.
- Shell to wall interface seal was in good shape with no signs of a leak.
- Manway davit arms were in good working condition.
- PSV was located without restrictions, service date and set pressure acceptable.
- No UT survey was carried out at this time as inspection was last done in October of 2013.

Internal inspection:

- East head firetube manway nozzle and gasket surfaces were in good shape.
- Minor coating repairs are required on the nozzles.
- All coating repairs were carried out at the time of inspection.
- Internal firetube supports were intact and secure.
- Horse shoe diffuser doors were intact and in good shape.
- Internal shell was in good shape with no corrosion, erosion.
- Wafer Chevron was intact, all bolting and supports secure.
- Internal Anode was in good shape. Roller and holder in good shape.
- All internal nozzles were in good shape with no corrosion or pitting.
- South West manway cover, nozzle and gasket surfaces were in good shape.
- West head manway cover, nozzle and gasket surfaces were in good shape.
- All manway Davit arms were in good working condition.
- Wafer Chevron supports secure all bolting in place.
- Oil collection box was in good shape.
- West shell internal was in good shape.
- One deep pit identified on the head the shell circ seam, coating repair was carried out at the time of inspection.
- 18" Internal firetube was pulled and cleaned for inspection.

Internal Firetube:

- Firetube was cleaned and inspected by VI, VE, UT and MT.
- Tube sheet and flange gasket surfaces were in good shape.



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- **No bulging or deformation of the tubes or tube sheet.**
- **Tube legs were free from pitting internally and externally.**
- **Pitting on the tube sheet 0.060" deep 1" wide and 20" long, to be monitored at next inspection.**
- **UT Survey was carried out in October 2013. No changes in the readings were found; all readings were acceptable; see attached UT Report.**
- **MPI was carried out on all miter joint welds and fillet welds, no areas of concern; see attached MPI Report.**

Recommendations:

Monitor the corrosion on the tube sheet at next inspection and if needed send out for weld repairs.

Continue to carry out visual inspections, UT Corrosion survey and MPI at the required inspection frequency.

Group Treater and Internal Firetube are fit for continued service.

X

Blair Verge
Verge's Inspection Services Ltd.

Inspector(s) Blair Verge API 510 Certification #24212

Field Inspection Report



A2710237_Name plate_9Sept2014



A2710237_North shell inside building_9Sept2014



A2710237_Firetube manway cover_9Sept2014



A2710237_East head_9Sept2014

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A2710237_South East shell_9Sept2014



A2710237_Saddle supports_9Sept2014



A2710237_Burner Assembly_9Sept2014



A2710237_West head manway and davit
arm_9Sept2014

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A2710237_West head manway cover and
davit arm_9Sept2014



A2710237_Firetube manway
nozzle_9Sept2014



A2710237_Firetube manway
nozzle_9Sept2014



A2710237_Firetube supports
intact_9Sept2014

Field Inspection Report



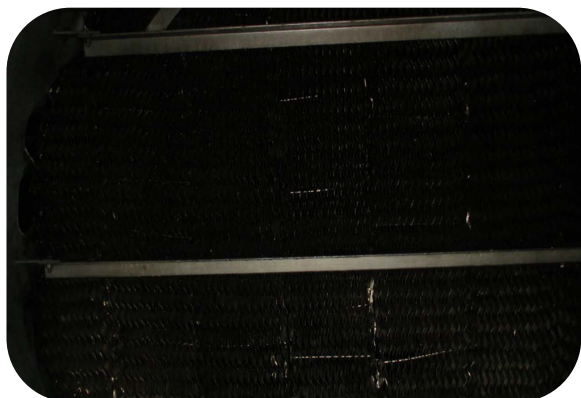
A2710237_Firetube guides and wafer chevron secure_9Sept2014



A2710237_East bottom shell coating intact_9Sept2014



A2710237_Horse shoe doors intact_9Sept2014



A2710237_Wafer Chevron supports secure_9Sept2014

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A2710237_Internal Anode, holder and rollers
in good shape_9Sept2014



A2710237_West head manway
cover_9Sept2014



A2710237_West head manway
nozzle_9Sept2014



A2710237_Internal piping secure_9Sept2014

Field Inspection Report



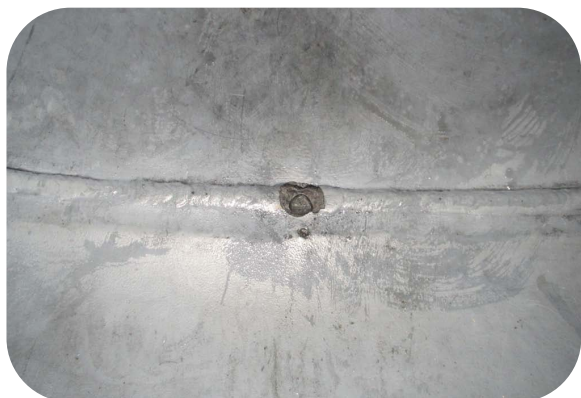
A2710237_West end bottom shell coating_9Sept2014



A2710237_Oil collection box_9Sept2014



A2710237_West head nuckle_9Sept2014



A2710237_West head to shell weld pitt 0.100" deep_9Sept2014



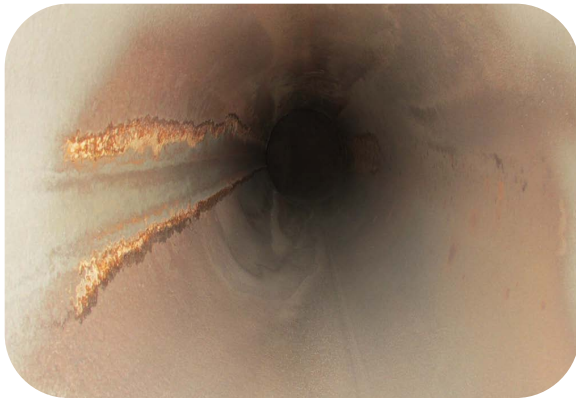
Field Inspection Report



A2710237_MPI of the burner and stack flanges_9Sept2014



A2710237_Tube sheet corrosion 0.060" deep 1" wide 20" long_9Sept2014



A2710237_Burner tube leg internal_9Sept2014



A2710237_Stack tube leg internal_9Sept2014

Field Inspection Report



A2710237_External pitting 0.030" on tube legs_9Sept2014



A2710237_MPI of the miter joint section fillet welds_9Sept2014



A2710237_MPI of the lifting lug to repad and repad to miter section shell_9Sept2014