

Perilon Inspection Inc.

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VI VE MT VESSEL INSPECTION REPORT

CLIENT	CNRL 2500, 855 - 2nd Street SW Calgary, Ab T2P 4J8	A Number	A2710237
CLIENT REP	Kyle Huculak RALSTON 5-14 (1339)	Ser Number	L-8-325
		Equipment	GROUP TREATER
		Inspec Date m/d/y	09/08/2015
		Facility	RALSTON 5-14 BATTERY
		LSD	05-14-018-10W4 BATTERY

Magnetic Particle Equipment

Tool: AC Hand Yoke	Model: Y-1	Indicator Black on White	Calibration: 10 lb lift
Power Source: 115 Volt	Ser No: 1074		Cal Due: 03/11/2016

Ultrasonic Equipment (0 degree)

Instrument	Ser No	Cal Due
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Probe Details

Model	Ser No	Angle	Freq	Dia	Cal Block 1	Cal Block 2

Vessel Equipment Identification

A Number A2710237	Eq Number	Equipment GROUP TREATER
Ser Number L-8-325	Unit	CRN H0995.2

Observations

INTERNAL OBSERBATIONS Shell had some 6:00 holidays, cleaned and Devoe 142 applied. Firetube MT examination showed no cracks.
EXTERNAL OBSERVATIONS 2 west anchor bolts loose. MT firetube, no cracks.

Recommendations

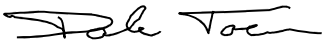
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Safety Valve Information

Shell MAWP 517 kPa	Tube MAWP kPa
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PSV Ser No	PSV Ser No	PSV Ser No
90C3880		
PSV Tag No	PSV Tag No	PSV Tag No
PSV Set Pres 517 kPa	PSV Set Pres	PSV Set Pres
PSV Capacity 2271 SCFM	PSV Capacity	PSV Capacity
PSV CRN	PSV CRN	PSV CRN
Side Protected SHELL	Side Protected	Side Protected
Last Serv m/d/y 10/08/2013	Last Serv m/d/y	Last Serv m/d/y

Inspector Information

Inspector Dale Toews	PESL Reg Number	00036
Signature 	API 510 Number	23064
	CGSB Lev 2 UT, MT Reg Number	10498
Assistant Rob Patterson		

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EXTERNAL INSPECTION ITEMS

G = Good, F = Fair, P = Poor, N/A = Not applicable

	G	F	P	NA	Comments
Insulation - Verify sealed around manways, nozzles, no damage present, and there is no egress of moisture. Are straps secure?	X				
External Condition - Assess paint condition, areas peeling, record any corrosion, damage, distortion etc (record location, size and depth of corrosion or damage)	X				
Leakage - Record any leakage at flanges, threaded joints, weep holes on repads, etc.	X				
Skirt/Saddle - 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. Is ground were attached? Does skirt have a hole for UT examination of bottom head?	X				
Anchor Bolts - Hammer tap to ensure secure. Look for corrosion, cracking in threads or signs of deformation.			X		2 east anchor bolts tight, 2 west anchor bolts loose.
Concrete Foundation -Check for cracks, spalling, etc.				X	
Ladder/Platform - Describe general condition, ensure support is secure to vessel, describe any hazards.				X	
Nozzle VE - Assess paint, look for leakage, and ensure stud threads are fully engaged. Record any damage, deflection, etc. Are nozzles gusseted? Inspect gussets for cracking.	X				
Gauges - Ensure gauges are visible, working, no leakage, and suitable for range of MAWP/Temp.	X				No pressure gauge, temperature gauge present.
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				Aligned well.
Valving - Ensure no leaks are visible. Valves are properly supported and chained if necessary.	X				
PSV - Ensure PSV is set at pressure at or below that of vessel. Discharge piping is same size as valve outlet and is properly supported and routed. Are PSV seals in place? Ensure no block valves between PSV and vessel, or if there are that they are locked/selaed open.	X				Piping sizes not checked.
NDE Methods - Was UT/MPI done on vessel?				X	
Other Observations:					

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INTERNAL INSPECTION ITEMS

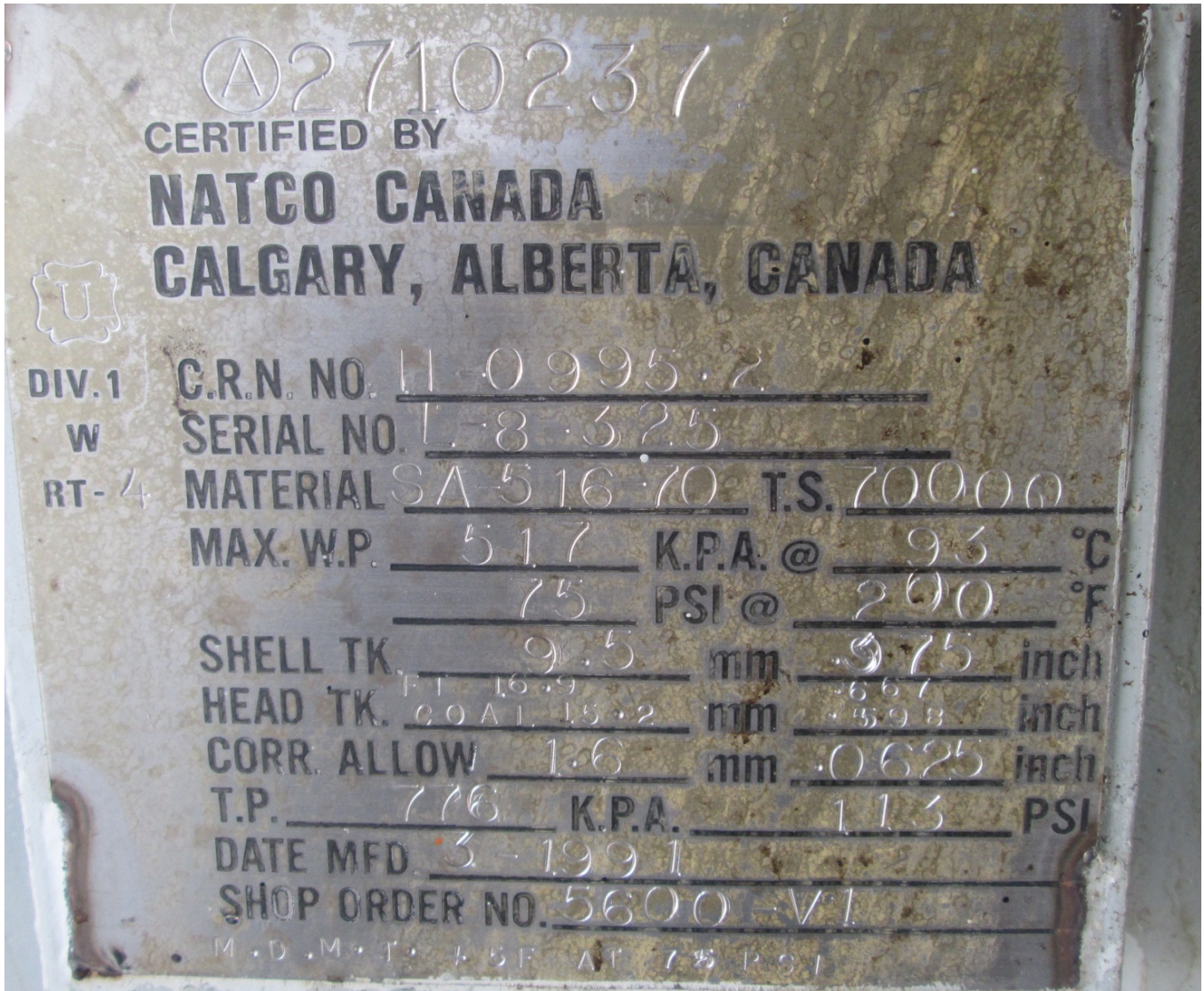
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	G	F	P	NA	Comments
Coating - Assess coating. Describe area coated, general condition of coating. Look at nozzles, coupling, and areas of most severe corrosion to ensure coating is intact. If coating is in poor condition make decision now if re-coating necessary? If so, when?	X				A few holidays along 6:00 shell, cleaned and Devoe 142 applied.
Anodes - How many, type, condition. % consumed. Are they being replaced?	X				Anodes 70% remaining.
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				Internal piping straight, no corrosion.
Trays - How many? Type of material. Are valves in place. Check for erosion/corrosion; wear on tray, valve legs. Cleanliness?				X	
Baffles, deflector plates, etc. - If present, describe condition. Look closely at welds attached to vessel wall.	X				Internal baffle separating vessel sections is fairly clean. One bolt on west end inlet baffle was out of place, another corroded. Both were repaired.
Bottom Head - Note all corrosion, erosion or mechanical damage. (If vessel is horizontal identify direction of this head)	X				
Top Head - Note all corrosion, erosion or mechanical damage. (If vessel is horizontal identify direction of this head)	X				
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 coating good, some holidays at 6:00, cleaned and Devoe 142 applied.
Nozzle VI - Note all corrosion, erosion, or mechanical damage.	X				
Demister pad - Is it in place? Is it clean? If any corrosion is apparaent 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				
Repairs Required - If yes, ensure procedure and copy of AB-40 is on file, and one sent to local ABSA Inspector.				X	
NDE - Was any NDE done.	X				MT examination of firetube, no cracks.
Other Observations:					

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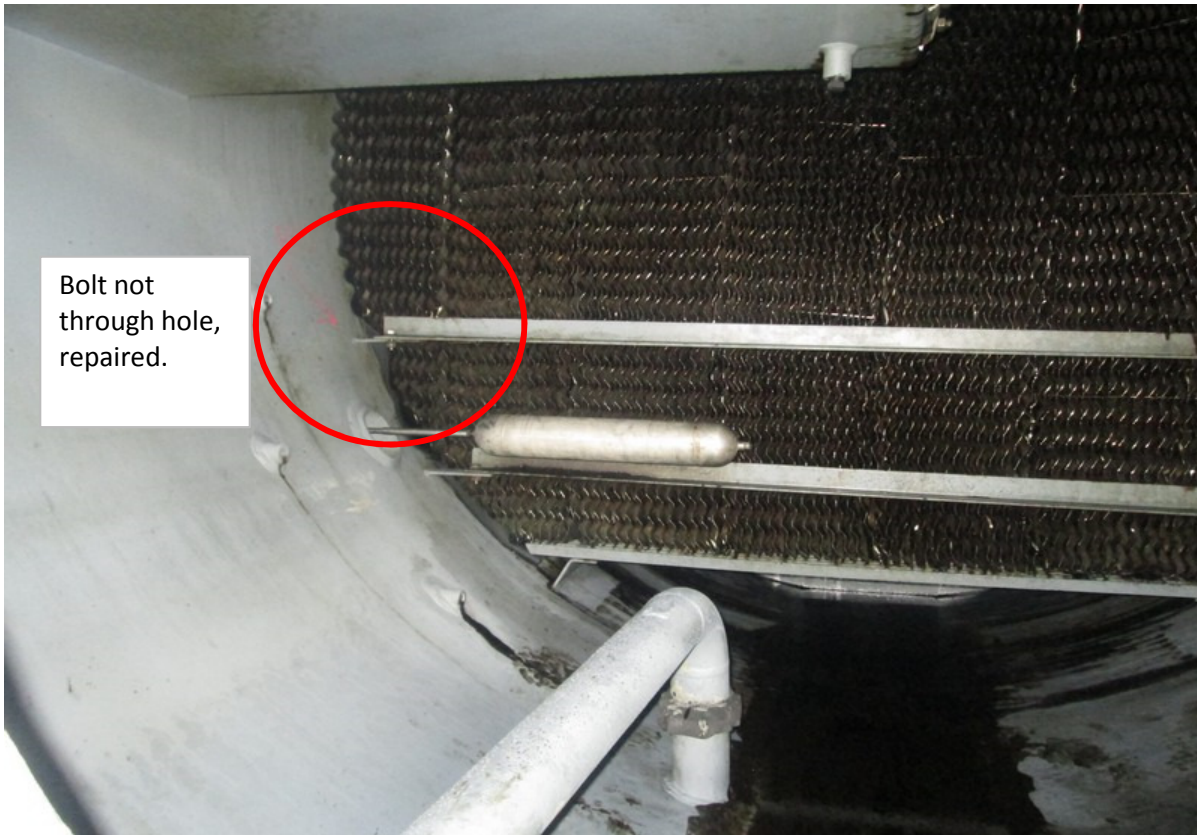
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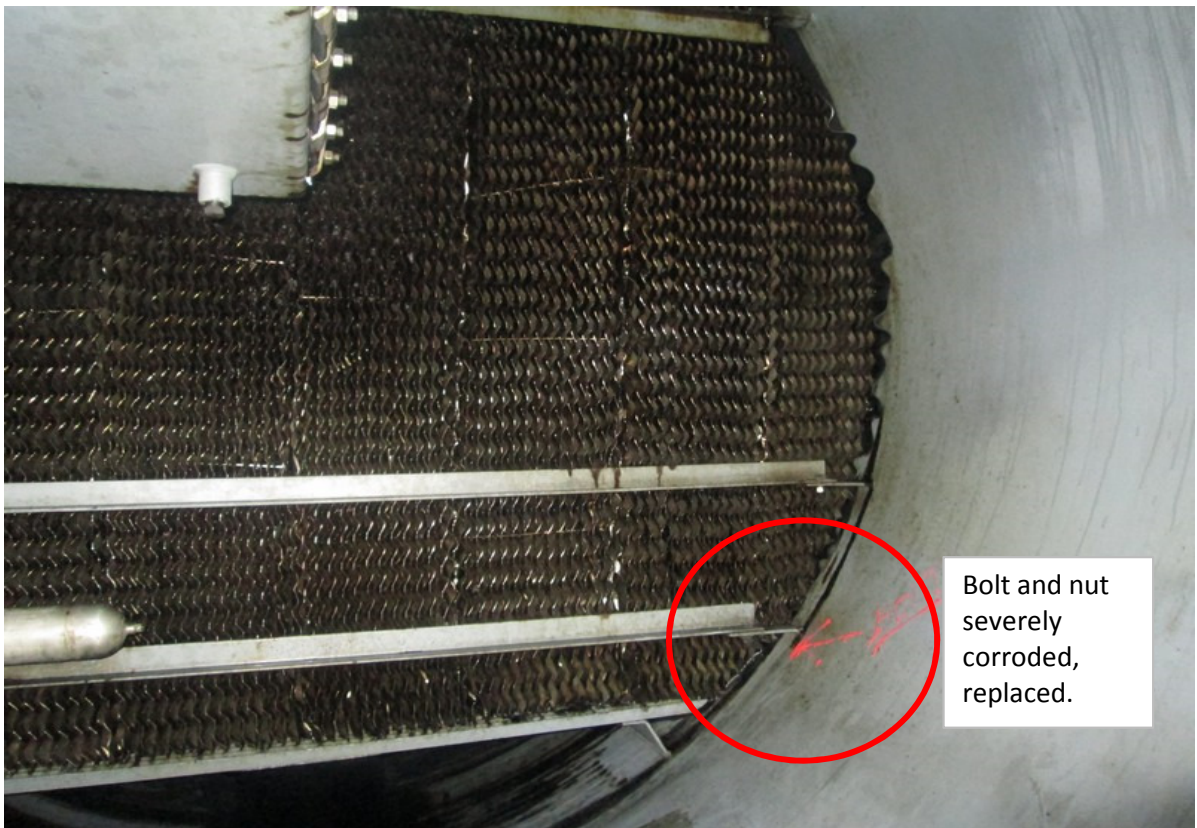
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Bolt not through hole, repaired.



Bolt and nut severely corroded, replaced.

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Middle section. Anodes in vessel, 70% remaining. Baffle group intact.



Electrical grid in middle section, unused.

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V-shrouds below firetubes are in good condition.



Coating holidays at 6:00 in shell and on manway cleaned and Devco 142 applied.



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PSV service tags and nameplate.

