



Crescent Point

VISUAL INSPECTION REPORT-PRESSURE VESSEL

Inspection Type <input checked="" type="checkbox"/> External <input checked="" type="checkbox"/> Internal											
Date:	February 27, 2018				Description:	<input checked="" type="checkbox"/> Vessel <input type="checkbox"/> Exchanger <input type="checkbox"/> Furnace <input type="checkbox"/> Boiler					
Inspector:	Ryan Hogg				Unit #:		Equip #:	848871			
Agent Co:	101292687 Saskatchewan LTD				Equip. Name:	Filter					
Location/LSD	BAT/09-32-001-28W1				CRN #:	T4605.4					
Province:	Manitoba				Manufacturer:	ESS Corp.					
Area:	Run 009 – Ingoldsby/Pierson				Year Built:	2014	S/N:	4551-B			
Subarea:	Battery 09-32-001-28W1				Jurisdiction #:		PWHT				
Service	<input type="checkbox"/> Sweet <input checked="" type="checkbox"/> Sour <input type="checkbox"/> Other: _____				PSV Location	Choose an item.			MDMT	-20F	
Vessel MAWP	150 PSI				Vessel MAWT	100 F			RT		
PSV Data	Set P	CPE#	Manufacturer	S/N	In. Sz.	Out. Sz.	Serv. Co.	Serv. Date	IV	CSO	Capacity
Shell Side									Y/N	Y/N	
Tube Side									Y/N	Y/N	
Other									Y/N	Y/N	
Components		Material	Nominal t	CA	Retire t	Lowest t	t OK?	Calc. t-min	Comment		
	Shell						<input type="checkbox"/> Y <input type="checkbox"/> N				
	Head				0.295"		<input type="checkbox"/> Y <input type="checkbox"/> N				
	Channel						<input type="checkbox"/> Y <input type="checkbox"/> N				
	Other						<input type="checkbox"/> Y <input type="checkbox"/> N		Specify:		
External Visual Inspection											
Orientation	<input type="checkbox"/> Hor. <input checked="" type="checkbox"/> Ver.		Foundation	<input type="checkbox"/> Concrete <input type="checkbox"/> Gravel <input type="checkbox"/> Timbers <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other:				Condition Welded to building floor			
Support	<input type="checkbox"/> Saddle		<input type="checkbox"/> Seal-welded		<input type="checkbox"/> Free to Move		Condition				
	<input type="checkbox"/> Skirt		<input type="checkbox"/> Free of debris Comment:				Condition				
	<input type="checkbox"/> Hangers		<input type="checkbox"/> Secure Comment:				Condition				
	<input checked="" type="checkbox"/> Other		Specify: Steel Legs to floor				Condition Secure				
Overall	General Condition Externally painted inside building, minor scrapes and marks						Electrical grounding: <input type="checkbox"/> Direct <input checked="" type="checkbox"/> Indirect <input type="checkbox"/> None				
Ext. Surface	<input checked="" type="checkbox"/> Painted <input type="checkbox"/> Insulated <input type="checkbox"/> Fire-proofed <input type="checkbox"/> Cladded <input type="checkbox"/> Other : _____										
Ext. Fixtures	<input type="checkbox"/> Ladder <input type="checkbox"/> Platform(s) <input type="checkbox"/> Other:						Condition				
Nozzles	<input type="checkbox"/> Manway <input checked="" type="checkbox"/> Port		Size: Removable top head			<input type="checkbox"/> Reinforcement Pads used		<input type="checkbox"/> Weep Holes Present			
	Comment:										
Davit Arm	<input checked="" type="checkbox"/> Present		<input type="checkbox"/> Greased			<input type="checkbox"/> Double Nut		Condition			



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Piping	<input type="checkbox"/> PSV	<input type="checkbox"/> Supported <input type="checkbox"/> Joined per code	<input type="checkbox"/> Drains Properly <input type="checkbox"/> Well Coated	Comment
	<input checked="" type="checkbox"/> Inlet	<input checked="" type="checkbox"/> Supported <input checked="" type="checkbox"/> Joined per code	<input checked="" type="checkbox"/> Free from leaks <input type="checkbox"/> Well Coated	Comment
	<input checked="" type="checkbox"/> Outlet	<input checked="" type="checkbox"/> Supported <input checked="" type="checkbox"/> Joined per code	<input checked="" type="checkbox"/> Free from leaks <input type="checkbox"/> Well Coated	Comment
	<input checked="" type="checkbox"/> Drain	<input checked="" type="checkbox"/> Supported <input checked="" type="checkbox"/> Joined per code	<input checked="" type="checkbox"/> Free from leaks <input type="checkbox"/> Well Coated	Comment
	<input checked="" type="checkbox"/> Instrumentation <input type="checkbox"/> Process Fluid Identified	<input checked="" type="checkbox"/> Supported <input checked="" type="checkbox"/> Joined per code	<input checked="" type="checkbox"/> Free from leaks/kinks <input type="checkbox"/> Flow direction marked	Comment Comment
Valves	<input checked="" type="checkbox"/> Manual Isolation Valve		<input checked="" type="checkbox"/> Free from leaks	Comment
	<input type="checkbox"/> Automated Control Valve		<input type="checkbox"/> Free from leaks	Comment
	<input type="checkbox"/> Vents and Drain plugged		<input type="checkbox"/> Free from leaks	Comment
Gauges	<input checked="" type="checkbox"/> Pressure	Reading: 0 PSI	Condition Clean and readable	
	<input type="checkbox"/> Temperature	Reading:	Condition	
Sight Glass	<input type="checkbox"/> Fluid Level	Reading:	Condition	
External Inspection Notes: No damages externally				
Internal Visual Inspection				
Date:	February 27, 2018	Inspector	Ryan Hogg	
Scope:	A visual internal (VI) inspection was performed on all accessible shell and head surfaces, nozzles, welds, etc.			
Access:	<input checked="" type="checkbox"/> Manway	<input type="checkbox"/> Hand-hole	<input type="checkbox"/> Inspection Nozzle	Diameter: Top head removed
Opening	Gasket Surfaces:	<input checked="" type="checkbox"/> Compliant with code	Comment	
	Nozzle Tube:	<input type="checkbox"/> No pitting, erosion, etc.	Comment Flange surface was corroding in need of replacement or repair.	
Shell and Head Surfaces	Uniform Corrosion:	<input checked="" type="checkbox"/> Insignificant amount	Comment	
	Pitting Corrosion:	<input type="checkbox"/> None noted	Comment Pitting throughout 4" center of bottom head	
	Erosion:	<input checked="" type="checkbox"/> None noted	Comment	
	Mechanical Damage:	<input checked="" type="checkbox"/> None noted	Comment	
Welds	Uniform Corrosion:	<input checked="" type="checkbox"/> Insignificant amount	Comment	
	Pitting Corrosion:	<input type="checkbox"/> None noted	Comment Pitting and minor corrosion throughout filter plate	
	Welding Defects:	<input checked="" type="checkbox"/> None noted	Comment	
NDE	<input checked="" type="checkbox"/> NDT was performed by: Ryan Hogg		Extent: Bottom head externally	
	NDE Type: UT	NDE Type:		
	Results: UT on bottom head showed pitting corrosion internally – nominal 0.500" pitting to 0.295" in center of head 4" area between the nozzles.			
Nozzles	Obstructions:	<input checked="" type="checkbox"/> None noted	Comment	



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	Corrosion:	<input checked="" type="checkbox"/> None noted	Comment
	Erosion:	<input checked="" type="checkbox"/> None noted	Comment
Attachments	<input type="checkbox"/> Vortex breaker	<input type="checkbox"/> Secure <input type="checkbox"/> Good Condition	Comment
	<input type="checkbox"/> Impingement plate	<input type="checkbox"/> Secure <input type="checkbox"/> Good Condition	Comment
	<input type="checkbox"/> Suction tube	<input type="checkbox"/> Secure <input type="checkbox"/> Good Condition	Comment
	<input type="checkbox"/> Demister	<input type="checkbox"/> Secure <input type="checkbox"/> Good Condition	Comment
	<input checked="" type="checkbox"/> Other: Filter plate	<input checked="" type="checkbox"/> Secure <input checked="" type="checkbox"/> Good Condition	Comment Minor surface corrosion throughout
Detailed Inspection Summary	<p>Inspection Practices: 2.0 Non-Fired Pressure Vessels Filter is showing internal pitting and corrosion at the time of inspection. Bottom head was UT'd reading the center areas between the nozzles in the bottom head in a 4" circular area was down to readings of 0.295" remaining – limited access to the area due to the internal filter holding plate. The top of the filter holder has minor corrosion and pitting. The nozzle off the bottom the sealing surface was corroding, the surface was approximately 1/8" into the gasket sealing area if gasket area continuing to corrode will create a leak on the nozzle seal. Vessel is to be cleaned out at each filter change interval – filter is at the end of life – prepare for a future replacement or repair – vessel could be pulled – nozzle replaced and internals blasted and coated.</p>		
Recommended Actions	<p>Due to the design of the filters the bottom head is pitting throughout, there is no access for repairing. The filter is at the end of life – prepare for a future replacement - vessel could be pulled – nozzle replaced and internals blasted and coated.</p>		
Integrity Status	Suitable for Continued Service <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Future Repairs Required		
Inventory Status	<input checked="" type="checkbox"/> Active <input type="checkbox"/> Out of Service <input type="checkbox"/> Surplus <input type="checkbox"/> Rental <input type="checkbox"/> Scrap		

Visual External Inspection Interval: 1 yrs OR Changed to: _____ yrs.

Visual Internal Inspection Interval: 1 yrs OR Changed to: _____ yrs.


Ultrasonic Inspection Interval: **6 month** OR Changed to: _____ yrs.

PSV Interval: _____ yrs OR Changed to: _____ yrs.

Class 1 Class 2 PEI Certificate #: 128

IPV/IBPV Certificate #: _____

Inspectors Name: Ryan Hogg

Signature: 

Chief Inspector: I certify that the information on this report is true and all inspections as required by our Owner/User Quality Assurance Program # QMS-0036 which expires September 6, 2018 have been done.

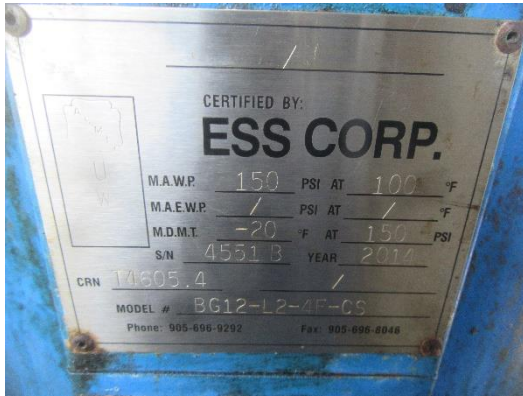
Recommendations:

Internally inspect at next filter change.

UT after 6 month of service due to corrosion issues in the adjacent filters.

Filters should be cleaned out on a regular basis when switching to opposite bank of filters.

Filter is at end of life – prepare for future replacement – or removal and repair.





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