

PRESSURE VESSEL & COLUMN INSPECTION REPORT

Date: Oct. 09, 2014

Report # : IR141009GENi

Plant	Celtic Compressor	Op Unit	HOG	System / LSD:	10-08-052-23w3
Equipment #	1000005511	Tag #	----	Asset Type	Scrubber
Description	Compressor Fuel Gas Scrubber	Prov. Insp. #	S 09268	Serial #	901128-06
Manufacturer	Enerflex Systems Ltd.	CRN	F8007.213	Year Built	1990
MAWP	1586	KPag	@ 149 °C	MDMT	-29 °C
Code	ASME VIII	Fluid Service	Natural Gas	Sweet	PWHT No
Internal Access	Yes	Insulated	No	Internal Coating	No
Operating Pressure	-	KPag	Operating Temp	-	°C

PSV DATA

Serial Number:	69436				
Manufacturer:	Mercer				
Model:	8112421037				
Set Pressure	Kpa 1138				
Capacity	SCFM 608				
Inlet Size	mm 25				
Outlet Size	mm 25				
Service Date:	mm/yyyy 10/2014				
Location:	Side of FGS				

INSPECTION SUMMARY

External:

A visual external inspection performed to the applicable standards did not identify any concerns with the pressure boundary of this equipment, there were no significant deficiencies noted.

This equipment was in service at the time of inspection.

A thorough inspection to verify the equipment's integrity was done by VE and UT.

The nameplate is intact and legible.

No NCR's were issued at this time.

Internal:

There was no internal inspection or NDE performed at this time, the scope of work was for an external inspection only.

NDE:

The UT readings are within acceptable limits: see the UT readings below.

RECOMMENDATIONS

The Serial # in SAP should be changed to 901128-06.


NONCONFORMANCES / INSPECTION DEFICIENCIES

INSPECTION PLANNING

Inspection Strategy	Availability	Inspection Interval	5 yrs - 4 years
Inspection Date 10/2014	Date of Last Inspection	Date of Next Inspection	10/2019 2018

REPORT CERTIFICATION

The signatures below certify that inspections/tests have been completed in accordance with the identified inspection strategy and that the specified equipment is considered fit for service until the date of next inspection.

VE Inspected by / Certification #	Guy Normand API 510# 23041		Date Oct. 9, 2014
VI Inspected by / Certification #			Date
Reviewed and Approved by	Remi Lacasse		Date
Criticality Assessment Rerun		Inspection Planning Rerun	
Assessed Next Inspection Date			

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DETAILED INSPECTION VISUAL EXTERNAL

ID	Description	Condition	Location	NCR / IDR	Comments
V1	General Other (Explain)	Good			This equipment was found to be acceptable for continued service. Any deficiencies are noted below. The nameplate is intact and legible.
V2	General Corrosion	Good			There is no corrosion present in the areas that were visibly accessible.
V3	General Leaks	Good			No leaks were noted.
V4	Vibration	N/A			
V5	Dissimilar Flange Rating	N/A			
V6	Ladder/Stairway	N/A			
V7	Heads	Good			The heads are in good mechanical condition.
V8	Guy Wires	N/A			
V9	Electrical Ground	Good			The equipment is grounded through the skid package.
V10	Painted Inactive Corrosion	N/A			
V11	Coating/Painting	Good			The paint is in fair condition.
V12	Expansion Joint or Bellows	N/A			
V13	Gauge/Site Glass	N/A			
V14	Shell	Good			The shell is in good mechanical condition.
V15	Jacket	N/A			
V21	Support Other (Explain)	N/A			
V22	Foundation	N/A			
V23	Anchor Bolts	Good			The anchor bolts are tight and secure.
V24	Saddle/Skirt	N/A			
V25	Davit	N/A			
V26	Fireproofing	N/A			
V31	Connections Other (Explain)	Good			All piping connections to the vessel are secure.
V32	Small Branches	Good			The instrumentation tubing is acceptable, no signs of leakage noted.
V33	Nozzles	Good			All nozzles are thread-o-lets.
V34	Manways	N/A			
V35	Reinforcing Pads	N/A			
V36	Inadequate Thread Engagement	Good			The thread engagement is adequate.
V37	Bolting	Good			The studs / nuts are secure.
V38	Flanges	Good			All flanges are intact with no defects noted.
V39	Leak Clamps	N/A			
V41	Insulation Other (Explain)	N/A			
V42	Damage	N/A			
V43	Penetrations	N/A			
V44	Insulation Jacket	N/A			
V45	Banding	N/A			
V46	Seals/Joints	N/A			
V51	Relief Devices Other (Explain)	Good			The PSV is set to the proper pop pressure and has been serviced within an acceptable time frame.
V52	Relief Devices Corrosion	N/A			
V53	Relief Devices Leaks	N/A			
V54	Restricted Inlet/Outlet	N/A			
V55	Manual Operation Lever	N/A			

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DETAILED INSPECTION VISUAL INTERNAL

ID	Description	Condition	Location	NCR / IDR	Comments
V1	General Other (Explain)				
V2	Corrosion (depth, length, width)				
V3	Erosion				
V4	Distortion				
V5	Blisters				
V6	Deposits				
V7	Heads				
V8	Welds				
V9	Nozzles				
V10	Shell				
V11	Gasket Surfaces				
V21	Internals Other(Explain)				
V22	Demister				
V23	Baffle/Weir				
V24	Sparger				
V25	Thermowells				
V26	Metallic Linings				
V27	Nonmetallic Linings				
V28	Trays				
V29	Tray Rings				
V30	Other: Welded Attachments				

DETAILED INSPECTION OTHER TECHNIQUES

ID	Location	Observation/Measurement	Acceptance Criteria	NCR / IDR	Comments
1					
2					
3					
4					
5					

DETAILED INSPECTION UT THICKNESS

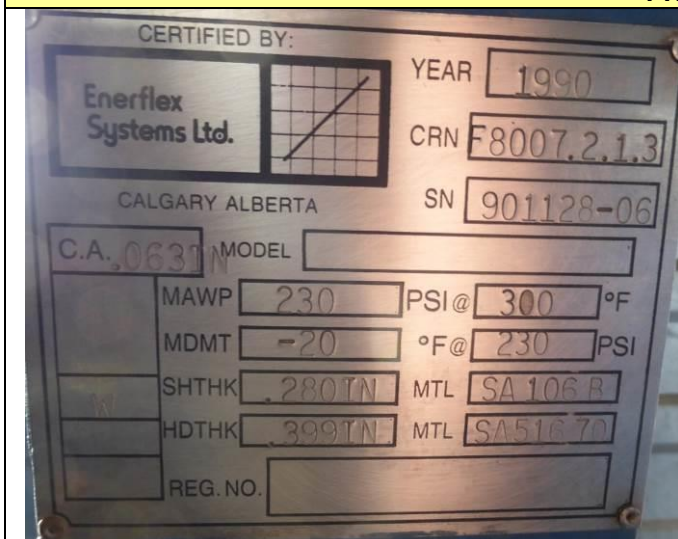
CML	Nom. Thk mm	Current Reading mm	Short Term Corr Rate	Long Term Corr Rate	Remaining Life	Comments
005	25.4	27.3				Top Head
010	7.1	7.7				Upper Shell
015	7.1	7.6				Lower shell @ the liquid level
020						
025						
030						
035						
040						
045						

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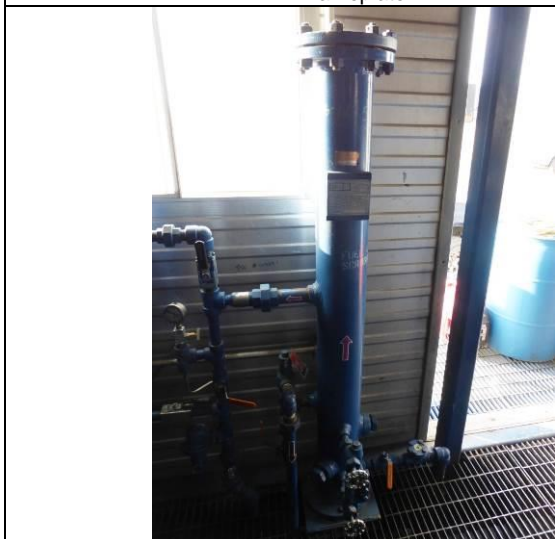
PHOTOS



Nameplate



Sask. #



Overall View