

PRESSURE VESSEL & COLUMN INSPECTION REPORT

LSD: 06-22-057-20W5

Date: 21-Jan-2016

SAP Equipment ID: 66172348

VESSEL STATIC DATA									
Plant: Foothills & BC			Op Unit				System		
Prov. Insp. # 483171			CRN P8150.2				Equip Tag #		
Equipment Description						Serial # 7751-03			
Manufacturer						Vessel Class Pressure Vessel			
Internal Access: YES			Description: Manway			Year Built			
MAWP 1480			PSI @ 100			°F			
CODE : U			RT : 1			PWHT : Yes			
Diameter 4 ft 6 in		Length (T/T) 16 ft		OAL		mm / in		Horizontal	
Shell	Mat'l	516-70N		Thickness	2.25		in		Corr Allowance .125 in
Head	Mat'l	516-70N		Thickness	2.25		mm / in		Corr Allowance .125 in
Nozzle	Mat'l			Thickness			mm / in		Corr Allowance mm / in
Internal Coating: NO				Internal Clad : NO				Capacity m ³	
Manway : YES				Inspection Port : YES				Saddle	
Nozzle Rating 600		lb ANSI		Painted : YES		Insulated YES			

PROCESS DATA									
Product Description						Sour			
Operating Pressure				kPa / PSI		Operating Temperature °C / °F			

PSV STATIC DATA									
Serial No.	Location	Size		Set Pressure	Capacity	Manufacturer	Model / Type	Service Date	
428828	Piping	Inlet 1.5 in	Outlet 2 in	1378 psi	8930 scfm	Farris	26FA1 3-120	2-Apr-2013	

Wizard valve service

NDE Equipment records					
Procedure#	Description	Manufacturer	Model#	Serial#	Due Date

INSPECTION SUMMARY

The external visual inspection of the equipment revealed:

- No relevant indications of in-service corrosion/erosion/mechanical defects or damage
- No non-conformances
- No inspection deficiencies
- A secondary intent for this inspection was to scope out locations for additional UT locations on the half of the vessel opposite to the manway. This area was not accessible during the 2012 internal inspection due to chevron vein pack.

RECOMMENDATIONS

- Recommend to remove external corrosion product/prep and re-paint areas of paint failure on shell/heads.
- Recommend UT on Blowcase charge gas equalization line which showed signs of external corrosion. (this will be planned for February 2016)

NONCONFORMANCES / INSPECTION DEFICIENCIES

None

INSPECTION PLANNING

Inspection Strategy	Availability	Inspection Interval
Inspection Date	Date of Last Inspect	Date of Next Inspect

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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.

Inspected by	Keith Courneyea		Date	21-Jan-2016
Reviewed and Approved by	_____	_____	Date	_____
Criticality Assessment Rerun	_____	_____	Inspection Planning Rerun	_____
Assessed Next Inspection Date	_____	_____	_____	_____

DETAILED INSPECTION VISUAL EXTERNAL

ID	Description	Condition	Location	NCR	Comments
V1	General Other (Please Explain)	Acceptable			Minor external corrosion noted less than .005 in deep as noted in areas of coating failure in item V11 below. Corrosion product was scraped away and wire brushed to allow for inspection.
V2	General Corrosion	Acceptable			See V1
V3	General Leaks	None			
V4	Vibration	None			
V5	Dissimilar Flange Rating	None			
V6	Ladder/Stairway	Acceptable			
V7	Heads	Acceptable			
V8	Guy Wires				
V9	Electrical Ground	Acceptable			
V10	Painted Inactive Corrosion	None			
V11	Coating/Painting	Fair			Paint failure noted at east end below manway on shell – approximately 2 square foot area. Several other small locations scattered around external.
V12	Expansion Joint or Bellows	NA			
V13	Gauge/Site Glass	Acceptable			
V14	Shell	Acceptable			
V15	Jacket	NA			
V21	Support Other (Please explain)	NA			
V22	Foundation	Acceptable			Steel skid
V23	Anchor Bolts	Acceptable			
V24	Saddle/Skirt	Acceptable			
V25	Davit	Acceptable			
V26	Fireproofing	NA			
V31	Connections Other (Please explain)	NA			
V32	Small Branches	Acceptable			
V33	Nozzles	Acceptable			
V34	Manways	Acceptable			
V35	Reinforcing Pads	None			
V36	Inadequate Thread Engagement	None			
V37	Bolting	Acceptable			
V38	Flanges	Acceptable			
V39	Leak Clamps	None			
V41	Insulation Other (Please explain)	NA			
V42	Damage	NA			
V43	Penetrations	NA			
V44	Insulation Jacket	NA			
V45	Banding	NA			
V46	Seals/Joints	NA			
V51	Relief Devices Other (Please explain)	Acceptable			

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V52	Corrosion	None			
V53	Leaks	None			
V54	Restricted Inlet/Outlet	None			
V55	Manual Operation Lever	NA			

DETAILED INSPECTION VISUAL INTERNAL

ID	Description	Condition	Location	NCR	Comments
V1	General Other (Please 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 (Please explain)				
V22	Demister				
V23	Baffle/Wier				
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	Comments
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

DETAILED INSPECTION UT THICKNESS

CML	Nom. Thk	Current Reading	Short Term Corr Rate	Long Term Corr Rate	Remaining Life	Comments

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PHOTOS



Location



Building overview



Nameplate



Overview



Drain piping/bottom shell



West bottom shell/saddle

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Support connection to skid. Rust flakes from paint failure/ minor external corrosion above.



Paint failure area with minor external surface corrosion less than .005 in deep on east end. Not an integrity issue at the time of inspection.



Close up of paint failure/external corrosion area.



Support system at manway end



Support system at manway end photo 2



Manway/davit

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PSV overview



PSV service tag side A



PSV service tag side B



Blowcase charge gas equalization line. Paint failure and external corrosion due to ice buildup/thaws from operational cycles. The discoloration on the vessel below the piping is the corrosion product (dust) from the equalization line.