

PRESSURE VESSEL & COLUMN INSPECTION REPORT

LSD: 12-05-054-20W5

Date: May 13, 2016

SAP Equipment ID: 66068277

VESSEL STATIC DATA									
Plant Galloway Gas Plant				Op Unit			System		
Prov. Insp. # NB 2302				CRN P-7225.2			Equip Tag #		
Equipment Description Condensate Cooler							Serial # 01614-1		
Manufacturer Air Cooled Exchangers							Vessel Class		
Internal Access: Description:							Year Built 2002		
MAWP 230		PSI		@ 298		°F		MDMT -20 °F	
CODE : U				RT :			PWHT :		
Diameter		Length (T/T)		mm		OAL		mm	
Shell	Mat'l			Thickness		mm		Corr Allowance mm	
Head	Mat'l			Thickness		mm		Corr Allowance mm	
Nozzle	Mat'l			Thickness		mm / in		Corr Allowance mm	
Internal Coating:				Internal Clad :			Capacity m ³		
Manway :				Inspection Port :					
Nozzle Rating		lb ANSI		Painted :			Insulated		

PROCESS DATA	
Product Description	
Operating Pressure kPa	Operating Temperature °C

PSV STATIC DATA						
Serial No.	Location	Set Pressure	Capacity SCFM	Manufacturer	Model / Type	Service Date / Company

PSV DETAILS			
	Type (Thread/Flange)	ANSI Rating	Size (inches)
PRD Inlet			
PRD Outlet			

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

INSPECTION SUMMARY

A visual external and UT inspection performed.
 -No issues with UT inspection.
 -No A#
 -A0465811 Condensate Stabilizer tower PSV protects cooler. PSV removed at the time of inspection.
 -Minor coating failures on cooler

RECOMMENDATIONS

None noted

NONCONFORMANCES / INSPECTION DEFICIENCIES

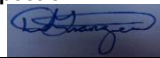
Ensure PSV is set at or below MAWP after service is completed.

INSPECTION PLANNING

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

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	Donavon Granger		Date	May 13, 2016
Company	Streamline Inspection Ltd	PESL #	000752	API # 48529
Reviewed and Approved by			Date	
		PESL #		API #
Criticality Assessment Rerun	Inspection Planning Rerun			

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Assessed Next Inspection Date

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DETAILED INSPECTION VISUAL EXTERNAL

ID	Description	Condition	Location	NCR	Comments
V1	General Other (Please Explain)	N/A			
V2	General Corrosion	Good			Minor scaling noted
V3	General Leaks	Acceptable			No active leaks present
V4	Vibration	N/A			
V5	Dissimilar Flange Rating	N/A			
V6	Ladder/Stairway	N/A			
V7	Heads	Good			Minor coating failure
V8	Guy Wires	N/A			
V9	Electrical Ground	Acceptable			Securely grounded
V10	Painted Inactive Corrosion	Acceptable			
V11	Coating/Painting	Acceptable			
V12	Expansion Joint or Bellows	N/A			
V13	Gauge/Site Glass	N/A			
V14	Shell	N/A			
V15	Jacket	N/A			
V21	Support Other (Please explain)	N/A			
V22	Foundation	Acceptable			
V23	Anchor Bolts	N/A			
V24	Saddle/Skirt	N/A			
V25	Davit	N/A			
V26	Fireproofing	N/A			
V31	Connections Other (Please explain)	N/A			
V32	Small Branches	N/A			
V33	Nozzles	Acceptable			No stresses, corrosion or misalignment
V34	Manways	N/A			
V35	Reinforcing Pads	N/A			
V36	Inadequate Thread Engagement	Acceptable			No concerns noted
V37	Bolting	Acceptable			Intact with no missing bolts or short bolting
V38	Flanges	Acceptable			No active leaks
V39	Leak Clamps	N/A			
V41	Insulation Other (Please explain)	Acceptable			Piping insulated
V42	Damage	N/A			
V43	Penetrations	N/A			
V44	Insulation Jacket	N/A			
V45	Banding	Acceptable			No concerns
V46	Seals/Joints	Acceptable			No concerns
V51	Relief Devices Other (Please explain)	N/A			removed
V52	Corrosion	Acceptable			None noted
V53	Leaks	Acceptable			None noted
V54	Restricted Inlet/Outlet	N/A			
V55	Manual Operation Lever	N/A			

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PHOTOS



Galloway Gas Plant



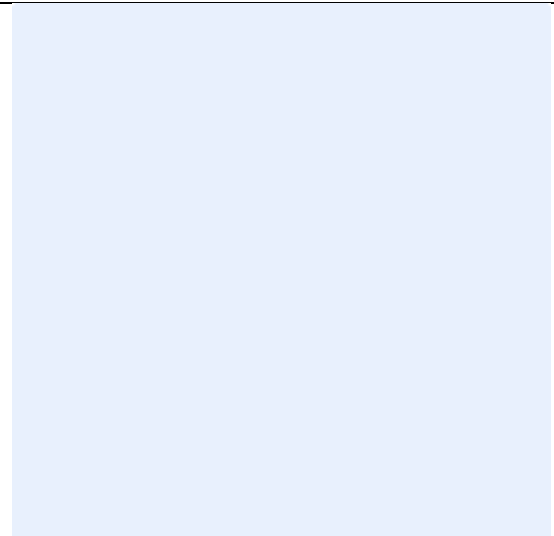
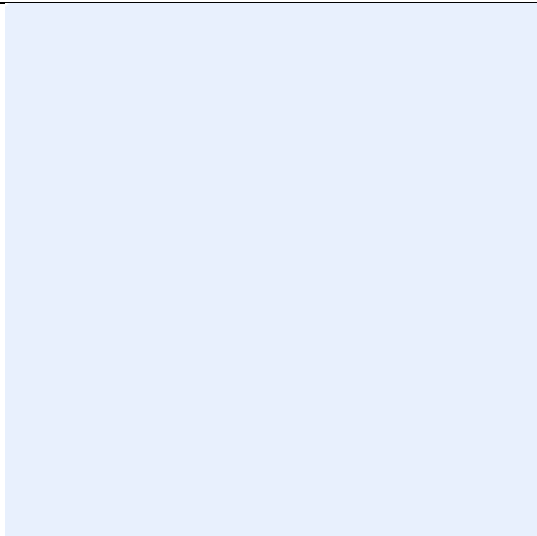
Nameplate



One side of cooler



Inlet and Outlet Side of Cooler





Location Name:	GALLOWAY	LSD:	12-05-054-20W5
Jur #:		Equipment/Tag No.	NB# 2302
Equipment Description:	COOLER		
Manufacturer:	AIR COOLED EXCHANGERS		
Serial Number:	01614-1	CRN:	P 7225.2
Shell MAWP:	230	PSI	Shell Design Temp: 298 °F
Tube MAWP:		PSI	Tube Design Temp: °F
Shell Material:	Unknown	Head Material:	Unknown
Shell Thickness:		mm	Head Thickness: mm
Corrosion Allowance:		mm	Date Built: 2002
Size:		mm	Pipe / Rolled Plate:
RT:			

NOTES: SAP 66068277





Ultrasonic Corrosion Survey

*All values are in millimeters unless otherwise stated.

Survey Name: Husky Energy

Date: MAY 13, 2016

Inspector: D. Skeard

LSD: 12-05-054-20W5	Area: GALLOWAY	Location: PLANT
Jur #:	Tag Number: NB# 2302	Vessel Name: COOLER
CRN: P 7225.2	Year Built: 2002	Serial Number: 01614-1
RT:	Vessel CA: 0.000 mm	Manufacturer: AIR COOLED EXCHANGERS
	Shell MAWP: 230 PSI	Tube MAWP: PSI
	MAWTF: 298 °F	MAWTF: °F
		Pipe/Plate

TML Description	Baseline	Material: Unknown
00 HEAD	2016	
Shape: Flat	Min 12.60	Flag CA Nominal T Min
OD: 0	Avg 12.67	STCR mm/yr 0.000
Spec: ASME VIII Div.1	Comments:	LTCR mm/yr 0.000
		Remaining Life:
		Retirement Date:

TML Description	Baseline	Material: Unknown
05 HEAD	2016	
Shape: Flat	Min 12.67	Flag CA Nominal T Min
OD: 0	Avg 12.85	STCR mm/yr 0.000
Spec: ASME VIII Div.1	Comments:	LTCR mm/yr 0.000
		Remaining Life:
		Retirement Date:

TML Description	Baseline	Material: Unknown
10 HEAD	2016	
Shape: Flat	Min 12.52	Flag CA Nominal T Min
OD: 0	Avg 12.70	STCR mm/yr 0.000
Spec: ASME VIII Div.1	Comments:	LTCR mm/yr 0.000
		Remaining Life:
		Retirement Date:

TML Description	Baseline	Material: Unknown
15 HEAD	2016	
Shape: Flat	Min 12.40	Flag CA Nominal T Min
OD: 0	Avg 12.57	STCR mm/yr 0.000
Spec: ASME VIII Div.1	Comments:	LTCR mm/yr 0.000
		Remaining Life:
		Retirement Date:



Ultrasonic Corrosion Survey

*All values are in millimeters unless otherwise stated.

Survey Name: Husky Energy

Date: MAY 13, 2016

Inspector: D. Skeard

LSD: 12-05-054-20W5	Area: GALLOWAY	Location: PLANT
Jur #:	Tag Number: NB# 2302	Vessel Name: COOLER
CRN: P 7225.2	Year Built: 2002	Serial Number: 01614-1
RT:	Vessel CA: 0.000 mm	Manufacturer: AIR COOLED EXCHANGERS
	Shell MAWP: 230 PSI	Tube MAWP: MAWTF: Pipe/Plate
		°F °F 0

TML Description	Baseline	Material: SA-106-B
20 NOZZLE	2016	
Shape: 360° Circ	Min 8.69	Flag 7.623 CA 1.089 Nominal 8.712 T Min STCR mm/yr 0.000 LTCR mm/yr 0.002
OD: 60.325	Avg 8.84	
Spec: ASME VIII Div.1	Comments: ASSUMED NOMINAL	Remaining Life: Retirement Date:

TML Description	Baseline	Material: SA-106-B
25 NOZZLE	2016	
Shape: 360° Circ	Min 8.48	Flag 7.623 CA 1.089 Nominal 8.712 T Min STCR mm/yr 0.000 LTCR mm/yr 0.016
OD: 60.325	Avg 8.97	
Spec: ASME VIII Div.1	Comments: ASSUMED NOMINAL, EROSION NOTED	Remaining Life: Retirement Date:

TML Description	Baseline	Material: A-234-WPB
30 PIPING	2016	
Shape: 90° Elbow	Min 4.29	Flag 3.423 CA 0.489 Nominal 3.912 T Min STCR mm/yr 0.000 LTCR mm/yr 0.000
OD: 60.325	Avg 4.47	
Spec: ASME B31.3	Comments: ASSUMED NOMINAL	Remaining Life: Retirement Date:

TML Description	Baseline	Material: A-234-WPB
35 PIPING	2016	
Shape: 90° Elbow	Min 3.68	Flag 3.423 CA 0.489 Nominal 3.912 T Min STCR mm/yr 0.000 LTCR mm/yr 0.016
OD: 60.325	Avg 3.86	
Spec: ASME B31.3	Comments: ASSUMED NOMINAL	Remaining Life: Retirement Date: