



ULTRASONIC CORROSION SURVEY

Survey Name: CNRL

LSD: 14-04-075-11W6	Dwg: 159	Vessel Number: A0486625	Manufacturer: BS&B	Survey Date: 2/01/11
District Unit: WEST COUNTY		Vessel Name: LINE HEATER - PIPING	Serial Number: 021019-003V2	Inspector: RAJ KHAN
Location: VALHALLA		Year Built: 2002	Shell MAWP PSI: 3375 MAWT F: 200	Process: SOUR
Skid: SKD0243		Tag Number: -	Tube MAWP PSI: 1563 MAWT F: 200	Project #: C70099
		CRN: B60.2134578T	Vessel CA: 0.1250	

Band	Description		Readings						Year	Avg Inches	Min Inches	Nominal	CA	TMIN	Recommended Next Inspection	Recommended Retirement Date
			1	2	3	4	5	6								
159-05	Piping	Baseline	0.602	0.588	0.575	0.572	0.582	0.585	2006	0.584	0.572	0.6000	0.0750	0.2723	2012	2031
Shape	90° Elbow	Shell Side	Previous	0.602	0.588	0.575	0.572	0.582	0.585	2006	0.584	0.572	Comments-->			
OD	3.5		Current	0.591	0.583	0.575	0.572	0.582	0.585	2011	0.581	0.572				
Spec.	B31.3			ST Loss MPY						0.000	OK					
Material	A 234 - WPB			LT Loss MPY						0.000						
159-10	Piping	Baseline	0.612	0.596	0.578	0.578	0.579	0.593	2006	0.589	0.578	0.6000	0.0750	0.2723	2012	2031
Shape	90° Elbow	Shell Side	Previous	0.612	0.596	0.578	0.578	0.579	0.593	2006	0.589	0.578	Comments-->			
OD	3.5		Current	0.612	0.586	0.578	0.578	0.579	0.593	2011	0.588	0.578				
Spec.	B31.3			ST Loss MPY						0.000	OK					
Material	A 234 - WPB			LT Loss MPY						0.000						
159-15	Piping	Baseline	0.589	0.562	0.556	0.562	0.562	0.578	2006	0.568	0.556	0.6000	0.0750	0.2723	2012	2031
Shape	90° Elbow	Shell Side	Previous	0.589	0.562	0.556	0.562	0.562	0.578	2006	0.568	0.556	Comments-->			
OD	3.5		Current	0.589	0.562	0.556	0.562	0.562	0.573	2011	0.567	0.556				
Spec.	B31.3			ST Loss MPY						0.000	OK					
Material	A 234 - WPB			LT Loss MPY						0.000						
159-20	Piping	Baseline	0.605	0.581	0.579	0.581	0.593	0.596	2006	0.589	0.579	0.6000	0.0750	0.2723	2012	2031
Shape	90° Elbow	Shell Side	Previous	0.605	0.581	0.579	0.581	0.593	0.596	2006	0.589	0.579	Comments-->			
OD	3.5		Current	0.602	0.581	0.579	0.581	0.593	0.596	2011	0.589	0.579				
Spec.	B31.3			ST Loss MPY						0.000	OK					
Material	A 234 - WPB			LT Loss MPY						0.000						



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Location: VALHALLA		Year Built: 2002	Shell MAWP PSI: 3375 MAWT F: 200	Process: SOUR
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		CRN: B60.2134578T	Vessel CA: 0.1250	

Band	Description		Readings						Year	Avg Inches	Min Inches	Nominal	CA	TMIN	Recommended Next Inspection	Recommended Retirement Date
			1	2	3	4	5	6								
159-25	Piping	Baseline	0.563	0.565	0.569	0.569	0.569	0.565	2006	0.567	0.563	0.6000	0.0750	0.2723	2012	2031
Shape	Cylindrical	Shell Side	Previous	0.563	0.565	0.569	0.569	0.569	0.565	2006	0.567	0.563	Comments-->			
OD	3.5		Current	0.561	0.565	0.569	0.569	0.569	0.565	2011	0.566	0.561				
Spec.	B31.3			ST Loss MPY						0.000	OK					
Material	A 106 - B			LT Loss MPY						0.000						
159-30	Piping	Baseline	0.434	0.417	0.416	0.416	0.418	0.417	2006	0.420	0.416	0.4360	0.0545	0.1848	2012	2031
Shape	90° Elbow	Shell Side	Previous	0.434	0.417	0.416	0.416	0.418	0.417	2006	0.420	0.416	Comments-->			
OD	2.375		Current	0.434	0.417	0.416	0.416	0.418	0.417	2011	0.420	0.416				
Spec.	B31.3			ST Loss MPY						0.000	OK					
Material	A 234 - WPB			LT Loss MPY						0.000						
159-35	Piping	Baseline	0.419	0.406	0.407	0.411	0.410	0.423	2006	0.413	0.406	0.4360	0.0545	0.1848	2012	2031
Shape	90° Elbow	Shell Side	Previous	0.419	0.406	0.407	0.411	0.410	0.423	2006	0.413	0.406	Comments-->			
OD	2.375		Current	0.419	0.406	0.407	0.411	0.410	0.423	2011	0.413	0.406				
Spec.	B31.3			ST Loss MPY						0.000	OK					
Material	A 234 - WPB			LT Loss MPY						0.000						
159-40	Piping	Baseline	0.306	0.301	0.307	0.304	0.303	0.305	2006	0.304	0.301	0.3000	0.0375	0.1316	2012	2031
Shape	Cylindrical	Tube Side	Previous	0.306	0.301	0.307	0.304	0.303	0.305	2006	0.304	0.301	Comments-->			
OD	3.5		Current	0.306	0.301	0.307	0.279	0.285	0.281	2011	0.293	0.279				
Spec.	B31.3			ST Loss MPY						0.004	OK					
Material	A 106 - B			LT Loss MPY						0.004						



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			1	2	3	4	5	6								
159-45	Piping	Baseline	0.263	0.260	0.259	0.259	0.258	0.263	2006	0.260	0.258	0.3000	0.0375	0.1316	2012	2031
Shape	90° Elbow	Tube Side	Previous	0.263	0.260	0.259	0.259	0.258	0.263	2006	0.260	0.258	Comments-->			
OD	3.5		Current	0.263	0.260	0.259	0.259	0.258	0.263	2011	0.260	0.258				
Spec.	B31.3									ST Loss MPY	0.000	Caution				
Material	A 234 - WPB									LT Loss MPY	0.000					
159-50	Piping	Baseline	0.330	0.327	0.324	0.324	0.326	0.327	2006	0.326	0.324	0.3000	0.0375	0.1316	2012	2031
Shape	90° Elbow	Tube Side	Previous	0.330	0.327	0.324	0.324	0.326	0.327	2006	0.326	0.324	Comments-->			
OD	3.5		Current	0.330	0.327	0.324	0.324	0.326	0.327	2011	0.326	0.324				
Spec.	B31.3									ST Loss MPY	0.000	OK				
Material	A 234 - WPB									LT Loss MPY	0.000					
159-55	Piping	Baseline	0.286	0.278	0.273	0.271	0.271	0.274	2006	0.276	0.271	0.3000	0.0375	0.1316	2012	2031
Shape	90° Elbow	Tube Side	Previous	0.286	0.278	0.273	0.271	0.271	0.274	2006	0.276	0.271	Comments-->			
OD	3.5		Current	0.276	0.274	0.273	0.271	0.271	0.274	2011	0.273	0.271				
Spec.	B31.3									ST Loss MPY	0.000	OK				
Material	A 234 - WPB									LT Loss MPY	0.000					
159-60	Piping	Baseline	0.267	0.266	0.265	0.264	0.268	0.273	2006	0.267	0.264	0.3000	0.0375	0.1316	2012	2031
Shape	90° Elbow	Tube Side	Previous	0.267	0.266	0.265	0.264	0.268	0.273	2006	0.267	0.264	Comments-->			
OD	3.5		Current	0.267	0.266	0.265	0.264	0.268	0.273	2011	0.267	0.264				
Spec.	B31.3									ST Loss MPY	0.000	OK				
Material	A 234 - WPB									LT Loss MPY	0.000					



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			1	2	3	4	5	6								
159-65	Piping	Baseline	0.286	0.283	0.274	0.273	0.272	0.277	2006	0.278	0.272	0.3000	0.0375	0.1316	2012	2031
Shape	90° Elbow	Tube Side	Previous	0.286	0.283	0.274	0.273	0.272	0.277	2006	0.278	0.272	Comments-->			
OD	3.5		Current	0.286	0.282	0.274	0.273	0.272	0.277	2011	0.277	0.272				
Spec.	B31.3			ST Loss MPY						0.000	OK					
Material	A 234 - WPB			LT Loss MPY						0.000						
159-70	Piping	Baseline	0.282	0.283	0.281	0.280	0.282	0.284	2006	0.282	0.280	0.3000	0.0375	0.1316	2012	2031
Shape	90° Elbow	Tube Side	Previous	Comments-->												
OD	3.5		Current	0.282	0.283	0.281	0.280	0.282	0.284	2006	0.282	0.280				
Spec.	B31.3			ST Loss MPY							OK					
Material	A 234 - WPB			LT Loss MPY						0.000						