





# ULTRASONIC CORROSION SURVEY

Survey Name: **CNRL**

LSD: 09-02-075-11W6	Dwg: 98	Vessel Number: A0478629	Manufacturer: BS&B	Survey Date: 1/30/11
District Unit: WEST COUNTY		Vessel Name: LINE HEATER - PIPING	Serial Number: 011046-003	Inspector: RAJ KHAN
Location: VALHALLA		Year Built: 2001	Shell MAWP PSI: 3375 MAWT F: 200	Process: SOUR
Skid: SKD0220		Tag Number: -	Tube MAWP PSI: 1563 MAWT F: 200	Project #: <b>C70099</b>
		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								
<b>98-05</b>	Piping	<b>Baseline</b>	0.573	0.540	0.530	0.542	0.545	0.563	2006	0.549	0.530	0.6000	0.0750	0.2723	2012	2031
Shape	90° Elbow	Shell Side	<b>Previous</b>	0.573	0.540	0.530	0.542	0.545	0.563	2006	0.549	0.530	Comments-->			
OD	3.5		<b>Current</b>	0.573	0.540	0.530	0.542	0.545	0.559	2011	0.548	0.530				
Spec.	B31.3									<b>ST Loss MPY</b>	0.000	OK				
Material	A 234 - WPB									<b>LT Loss MPY</b>	0.000					
<b>98-10</b>	Piping	<b>Baseline</b>	0.569	0.560	0.567	0.578	0.576	0.593	2006	0.574	0.560	0.6000	0.0750	0.2723	2012	2031
Shape	90° Elbow	Shell Side	<b>Previous</b>	0.569	0.560	0.567	0.578	0.576	0.593	2006	0.574	0.560	Comments-->			
OD	3.5		<b>Current</b>	0.569	0.560	0.567	0.578	0.576	0.583	2011	0.572	0.560				
Spec.	B31.3									<b>ST Loss MPY</b>	0.000	OK				
Material	A 234 - WPB									<b>LT Loss MPY</b>	0.000					
<b>98-15</b>	Piping	<b>Baseline</b>	0.589	0.580	0.573	0.568	0.576	0.583	2006	0.578	0.568	0.6000	0.0750	0.2723	2012	2031
Shape	90° Elbow	Shell Side	<b>Previous</b>	0.589	0.580	0.573	0.568	0.576	0.583	2006	0.578	0.568	Comments-->			
OD	3.5		<b>Current</b>	0.589	0.580	0.573	0.568	0.576	0.583	2011	0.578	0.568				
Spec.	B31.3									<b>ST Loss MPY</b>	0.000	OK				
Material	A 234 - WPB									<b>LT Loss MPY</b>	0.000					
<b>98-20</b>	Piping	<b>Baseline</b>	0.621	0.616	0.615	0.617	0.614	0.621	2006	0.617	0.614	0.6000	0.0750	0.2723	2012	2031
Shape	Cylindrical	Shell Side	<b>Previous</b>	0.621	0.616	0.615	0.617	0.614	0.621	2006	0.617	0.614	Comments-->			
OD	3.5		<b>Current</b>	0.621	0.616	0.615	0.617	0.614	0.620	2011	0.617	0.614				
Spec.	B31.3									<b>ST Loss MPY</b>	0.000	OK				
Material	A 106 - B									<b>LT Loss MPY</b>	0.000					



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Band	Description		Readings						Year	Avg Inches	Min Inches	Nominal	CA	TMIN	Recommended Next Inspection	Recommended Retirement Date
			1	2	3	4	5	6								
98-25	Piping	Baseline	0.325	0.326	0.326	0.322	0.321	0.318	2006	0.323	0.318	0.3430	0.0429	0.0893	2012	2031
Shape	90° Elbow	Tube Side	Previous	0.325	0.326	0.326	0.322	0.321	0.318	2006	0.323	0.318	Comments-->			
OD	2.375		Current	0.325	0.326	0.326	0.322	0.321	0.318	2011	0.323	0.318				
Spec.	B31.3			ST Loss MPY						0.000	OK					
Material	A 234 - WPB			LT Loss MPY						0.000						
98-30	Piping	Baseline	0.286	0.284	0.276	0.277	0.278	0.280	2006	0.280	0.276	0.3000	0.0375	0.1316	2012	2031
Shape	90° Elbow	Tube Side	Previous	0.286	0.284	0.276	0.277	0.278	0.280	2006	0.280	0.276	Comments-->			
OD	3.5		Current	0.286	0.284	0.276	0.277	0.278	0.280	2011	0.280	0.276				
Spec.	B31.3			ST Loss MPY						0.000	OK					
Material	A 234 - WPB			LT Loss MPY						0.000						
98-35	Piping	Baseline	0.303	0.293	0.291	0.289	0.294	0.285	2006	0.293	0.285	0.3000	0.0375	0.1316	2012	2031
Shape	Cylindrical	Tube Side	Previous	0.303	0.293	0.291	0.289	0.294	0.285	2006	0.293	0.285	Comments-->			
OD	3.5		Current	0.303	0.293	0.291	0.289	0.294	0.285	2011	0.293	0.285				
Spec.	B31.3			ST Loss MPY						0.000	OK					
Material	A 106 - B			LT Loss MPY						0.000						
98-40	Piping	Baseline	0.287	0.283	0.281	0.276	0.274	0.276	2006	0.280	0.274	0.3000	0.0375	0.1316	2012	2031
Shape	90° Elbow	Tube Side	Previous	0.287	0.283	0.281	0.276	0.274	0.276	2006	0.280	0.274	Comments-->			
OD	3.5		Current	0.285	0.283	0.281	0.276	0.274	0.276	2011	0.279	0.274				
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								
98-45	Piping	Baseline	0.248	0.246	0.246	0.250	0.251	0.256	2006	0.250	0.246	0.3000	0.0375	0.1316	2012	2031
Shape	90° Elbow	Tube Side	Previous	0.248	0.246	0.246	0.250	0.251	0.256	2006	0.250	0.246	Comments-->			
OD	3.5		Current	0.248	0.246	0.246	0.250	0.251	0.256	2011	0.250	0.246				
Spec.	B31.3			ST Loss MPY						0.000	Caution					
Material	A 234 - WPB			LT Loss MPY						0.000						
98-50	Piping	Baseline	0.273	0.264	0.260	0.260	0.259	0.261	2006	0.263	0.259	0.3000	0.0375	0.1316	2012	2031
Shape	90° Elbow	Tube Side	Previous	0.273	0.264	0.260	0.260	0.259	0.261	2006	0.263	0.259	Comments-->			
OD	3.5		Current	0.273	0.264	0.260	0.260	0.259	0.261	2011	0.263	0.259				
Spec.	B31.3			ST Loss MPY						0.000	Caution					
Material	A 234 - WPB			LT Loss MPY						0.000						
98-55	Piping	Baseline	0.257	0.247	0.246	0.248	0.256	0.257	2006	0.252	0.246	0.3000	0.0375	0.1316	2012	2031
Shape	90° Elbow	Tube Side	Previous	0.257	0.247	0.246	0.248	0.256	0.257	2006	0.252	0.246	Comments-->			
OD	3.5		Current	0.257	0.247	0.246	0.248	0.256	0.257	2011	0.252	0.246				
Spec.	B31.3			ST Loss MPY						0.000	Caution					
Material	A 234 - WPB			LT Loss MPY						0.000						