STD LR 90ELL WPB 18; HEATRREDAMNATERIAL TEST REPORT

Trinity Fitting Group Inc. Hackney * Ladish * Flo-Bend

P.O. Box 568887 - 2525 Stemmons Freeway - Dallas, TX 75356 - 8887 Phone: (214) 589-8177 Fax: (214) 589-8892 BPCS

Order Number: 04-1064

(281807-006) DOC #00166453 04/12/16 Date: 12/17/04

Sold to: GFF INC

5650 EAST PONCE DE LEON STONE MOUNTAIN GA 30083

Ship to: GFF, INC. 5650 PONCE DE LEON AVE STONE MOUNTAIN GA 30083

2	18 STD	LR 90	DEG		A/SA 23	4 - 03			
2	18 STD LR 90 DEG EL A/SA 234 - 03 WPB A106B 55 16683 AS ROLLED AS TD LR 90 DEG EL A/SA 234 - 03 WPB A106B 55 18925 AS ROLLED/ HOT FORMED							NACE	MR0175
2							NACE	MR0175	
3							NACE	MR0175	
								NACE	MR0175
					THE RESERVE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAME				
MATERIAL CONTRACTOR OF THE PERSON NAMED IN	-	-					Cr	Mo	Al
							.100	.040	.0200
							.100	.030	.0200
						.070	.070	.050	.0200
M .140	1.270	.009	.001	.230	.149	.050	.040	.065	.0240
N	V	Che	mical						
	-						Pb	Co	CE
									.381
0000									.390
.0000									.369
	.058					8			.39
Tensile I	CST Type	Phy	sical	Proper		Flore /	45/ 0 55		
	The state of the s							Hardness HB	
02.0						46.0		169	
Size x 10	omm Type	Temr	Cha (F)			Later P	vnangion	8 Ch	
-	171	201112	. (17)	1000 1	ounas	Dater. E	xpansion	* Sr	lear
	Z 2 3 Test C M .180 M .180 M .170 M .140 N .0000 Tensile F 76.6 78.3 75.3 82.6	Test C Mn M .180 1.010 M .180 1.010 M .180 1.010 M .180 1.020 M .170 1.020 M .140 1.270 N V .000 .000 .000 .058 Tensile KSI Type 76.6 78.3 75.3 82.6	A106B 48 1 2 18 STD LR 90 A106B 55 18 2 18 STD LR 90 A106B 55 18 3 18 XH LR 90 Y56 48 187 Che Test C Mn P M .180 1.010 .012 M .180 1.030 .011 M .170 1.020 .011 M .140 1.270 .009 Che N V B .000 .0000 .000 .0000 .058 .0000 Tensile KSI Type Thick 76.6 78.3 75.3 82.6	A106B 48 16685 2 18 STD LR 90 DEG A106B 55 16683 2 18 STD LR 90 DEG A106B 55 18925 3 18 XH LR 90 DEG E Y56 48 18749 Chemical Test C Mn P S M .180 1.010 .012 .002 M .180 1.030 .011 .002 M .170 1.020 .011 .002 M .140 1.270 .009 .001 Chemical N V B Ti .000 .0000 .000 .0000 .00 .000 .0000 .00 .058 .0000 Physical Tensile KSI Type Thickness 76.6 78.3 75.3 82.6 Cha	A106B 48 16685 2 18 STD LR 90 DEG EL A106B 55 16683 2 18 STD LR 90 DEG EL A106B 55 18925 3 18 XH LR 90 DEG EL Y56 48 18749 Chemical Analys Test C Mn P S Si M .180 1.010 .012 .002 .250 M .180 1.030 .011 .002 .220 M .170 1.020 .011 .002 .230 M .140 1.270 .009 .001 .230 Chemical Analys N V B Ti Cb .000 .0000 .0000 .000 .0000 .0000 .000 .058 .0000 Physical Proper Tensile KSI Type Thickness Yield 76.6 78.3 75.3 82.6 Charpy Res	A106B 48 16685 AS ROLL 2 18 STD LR 90 DEG EL A/SA 23 A106B 55 16683 AS ROLL 2 18 STD LR 90 DEG EL A/SA 23 A106B 55 18925 AS ROLL 3 18 XH LR 90 DEG EL A/SA 23 Y56 48 18749 AS ROLL Chemical Analysis Test C Mn P S Si Cu M .180 1.010 .012 .002 .250 .013 M .180 1.030 .011 .002 .220 .119 M .170 1.020 .011 .002 .220 .119 M .140 1.270 .009 .001 .230 .149 Chemical Analysis (co N V B Ti Cb Sn .000 .0000 .0000 .000 .00 .000 .0000 .0000 .000 .00 .000 .0000 .0000 .000 .00 .058 .0000 .0000 .000 .00 .058 .0000 .0000 .006 .00 Physical Properties Tensile KSI Type Thickness Yield KSI % 76.6 78.3 75.3 82.6 Charpy Results	Alo6B	Alo6B	A106B

Type:

We certify that the material herein described has been manufactured, heat treated, sampled, tested, and inspected in accordance with the above standards and specifications and satisfies those requirements. We certify these flanges and fittings capable of passing a hydrostatic test compatible with their rating. The above figures are correct as contained in the records of the Company. This information has been electronically transmitted to our customer.