## CERTIFIED MATERIAL TEST REPORT Hackney Ladish Inc.

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Heat Code	Description / Spec	ifica	tions							
	TAP-CS-12XS			7JW	A/SA	234	-	07	WPB	(SMLS)
	A516-70	154	7103103	HOT	FORMED					NACE MR0175
H07JW	TAP-CS-12XS				A/SA	234	-	07	WPB	(SMLS)
	7516-70	15/	7101456	HOT	FORMED					NACE MR0175

				Che	emical	Analy	rsis			•	
Heat Code	Test	С	Mn	P	S	Si	Cu	Ni	Cr	Mo	Al
H07JA	M	.190	1.030	.013	.004	.190	.260	.080	.120	.010	.0310
H07JW	M	.200	1.040	.009	.004	.200	.370	.100	.110	.020	.0260

			Chem	ical An	alysis	(cont	.)			
Heat Code	N	V	В	Ti	Cb	Sn	W	Pb	Co	CE
H07JA	.0090	.005	.0001	.0010	.001	.012				.411
H07JW		.002	.0001	.0010	.001	.017				.431

	,		Physical	Propertie	S				
Heat Code	Tensile KSI	Type	Thickness	Yield KSI	&	Elong.	(4D)	% R.	Hardness HB
H07JA	78.5	$\mathbf{T}$		51.1		23.0			163
H07JW	79.0	${f T}$		51.0		22.0			163

						Chai	rpy Re	sults	ż			
Heat Code	Size	x 10	Omm !	Туре	Temp.	(F)	Foot	Pounds	Later.	Expansion	%	Shear
H07JA H07JW												

Test: M=Mill Product
Type: T=Transverse

We certify that the material herein described has been manufactured in accordance with the above standards and specifications and satisfies all the requirements of the editions specified. We certify all materials provided comply with ISO 10204 paragraph. 3.1 which replaces type 3.1.B of the 1991 edition of EN 10204. Our ISO9001:2000 certificate number is CERT11763-2007-AQ-HOU-RVA/ANAB. We certify these fittings capable of passing 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.