## CERTIFIED MATERIAL TEST REPORT Hackney Ladish Inc.

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	Heat Code	Description /	<u>/ Specifications</u>
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A/SA 234 - 07 WPB (SMLS) TAP-CS-8XS J07LJ1

NACE MR0175 7105666 HOT FORMED A516-70 154

A/SA 234 - 07 WPB (SMLS) TAP-CS-8XS K07MK

NACE MR0175 A516-70 154 7106889 HOT FORMED

Chemical Analysis

Heat Code	Test	С	Mn	P	S	Si	Cu	<u> Ni</u>	<u>Cr</u>	Mo	Al
J07LJ1						.170	.280	.070	.090	.000	.0230
K07MK	M	.190	1.040	.013	.002	.240	.220	.050	.100	.000	.0270

Chemical Analysis (cont.)

Heat Code	N	V	В	<u> Ti</u>	<u> </u>	_Sn	W	Pb	Co	CE
J07LJ1		.002	.0001	.0010	.001	.006				.420
K07MK		.002	.0001	.0020	.001	.006				.401

Physical Properties

Heat Code	Tensile KSI	Type	Thickness	Yield KSI	% Elong.	(4D)	% RA	<u> Hardness HB</u>
J07LJ1	79.1	T		53.8	22.5			163
K07MK	80.6	${f T}$		54.5	23.1			163

Charpy Results

Heat Code Size x 10mm Type Temp. (F) Foot Pounds Later. Expansion % Shear J07LJ1 K07MK

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 ISO 9001:2008 certificate number is CERT-11763-2007-USA-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.