

CERTIFIED MATERIAL TEST REPORT  
Hackney Ladish Inc.

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Heat Code Description / Specifications

KD98AK	T-REDS-2 1/2-1 1/2STD	A/SA 234 - 96A WPB (SMLS)
	A106B 09 / Y66250	STRESS RELIEVED NACE MR0175

Chemical Analysis

Heat Code	Test	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Al
KD98AK	M	.170	.720	.008	.003	.210	.010	.020	.080	.030	

Chemical Analysis (cont.)

Heat Code	N	V	B	Ti	Cb	Sn	W	Pb	Co	CE
KD98AK		.000			.000					.314

Physical Properties

Heat Code	Tensile KSI	Type	Thickness	Yield KSI	% Elong. (4D)	% RA	Hardness HB
KD98AK	70.6	L		46.1	35.0		132

Charpy Results

Heat Code	Size x 10mm	Type	Temp. (F)	Foot Pounds	Later. Expansion	% Shear
KD98AK						

Test: M=Mill Product  
Type: L=Longitudinal

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.