

CERTIFIED MATERIAL TEST REPORT
Hackney Ladish Inc.

P.O. Box 803466 - 5495 Beltline Rd. #290 - Dallas, TX 75254
Phone: (800) 527-4500 Fax: (214) 269-5601

Heat Code Description / Specifications

B06HRS	14 X 12 STD RED EXC	A/SA 234 - 05A WPB (SMLS)
	TRI47 35 79908	STRESS RELIEVED NACE MR0175

Chemical Analysis

<u>Heat Code</u>	<u>Test</u>	<u>C</u>	<u>Mn</u>	<u>P</u>	<u>S</u>	<u>Si</u>	<u>Cu</u>	<u>Ni</u>	<u>Cr</u>	<u>Mo</u>	<u>Al</u>
B06HRS	M	.180	.930	.013	.004	.210	.010	.060	.080	.010	.0210

Chemical Analysis (cont.)

<u>Heat Code</u>	<u>N</u>	<u>V</u>	<u>B</u>	<u>Ti</u>	<u>Cb</u>	<u>Sn</u>	<u>W</u>	<u>Pb</u>	<u>Co</u>	<u>CE</u>
B06HRS	.0060	.002			.001					.358

Physical Properties

<u>Heat Code</u>	<u>Tensile KSI</u>	<u>Type</u>	<u>Thickness</u>	<u>Yield KSI</u>	<u>% Elong. (4D)</u>	<u>% RA</u>	<u>Hardness HB</u>
B06HRS	66.5	L	.369	45.1	34.0	.0	135

Charpy Results

<u>Heat Code</u>	<u>Size x 10mm</u>	<u>Type</u>	<u>Temp. (F)</u>	<u>Foot Pounds</u>	<u>Later. Expansion</u>	<u>% Shear</u>
B06HRS						

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.