

CERTIFIED MATERIAL TEST REPORT
Hackney Ladish Inc.

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Heat Code Description / Specifications

EC02IN	T-RECS-18-STD	A/SA 234 - 01	WPB	(SMLS)
	A106-B 9/B27796	NORM. 1650		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>
EC02IN	M	.170	1.000	.003	.005	.220	.030	.020	.050	.010	.0340

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>
EC02IN	.0050	.010	.0005	.0100	.010	.003	.002	.001	.050	.353

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>
EC02IN	72.6	L		47.8	37.0	75.0	137

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>
EC02IN						

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.