

6727.1.2

TEST REPORT

	<input checked="" type="checkbox"/> RTI NILES 1000 WARREN AVE. NILES, OHIO 44446	DATE SALES ORDER NO. 144883 GRADE BAL-4V PACKING LIST NO. 80300721
	CUSTOMER NAME & ADDRESS RTI INTL. METALS LTD.	CUSTOMER ORDER NO. RMI-3543-A
IDENTIFICATION & REFER MATERIAL NUMBER 8H28551	INGOT NO 03 LOT 01	MATERIAL H.R., ANNEALED AND CLEANED TI PLATE SPECIFICATION ASTM B 263-TI GR. 3, AMS 4911L, MIL-T-9046J AM. 2 AB-1, B82TA 36,2009, ISO 5832 PT 3 7/1/96, WL 3,7164.1, DIN 63039, LN 9207-91, ABS 5125-A ISS. 8 FLATNESS N, AIMS 03-18-001 ISS. 4, RP 9000 SABRE, MSRR 8633 ISS. 5, ZBI-470268-C99, RTI QOR 001, ASN A 3304 REV. J
PRODUCTION ORDER 30154526		

CHEMISTRY:		<input checked="" type="checkbox"/> INGOT (AVERAGE OF TOP-CENTER-BOTTOM)	<input type="checkbox"/> INGOT (AVERAGE OF TOP-BOTTOM)	<input type="checkbox"/> FINAL PRODUCT
ELEMENT		TEST	TEST INFORMATION	FRACTURE TOUGHNESS KSI√IN
C	.011		LAB	Specimen Size:
N	.003	ST Tensiles	Westwood Mech. Testng, Youngstown, PA	Hardness #
Fe	.18	Balance of Tests	RTI-Niles, Niles, OH	Val. Ck
Al	6.43			
V	3.95			
O	.18			
Y	<50 PPM			
			RESIDUAL ELEMENTS, EACH <10%	
			RESIDUAL ELEMENTS, TOTAL <30%	
			CHEMISTRY TEST METHODS:	
			ALLOY CHEM: SPARK OES	
			O2/N2: ASTM E 1409	
			HYDROGEN: ASTM E 1447	
			CARBON: ASTM E 1941	
TI	BALANCE			
FINAL PRODUCT	OKY			
	HYD(PPM)	23		

PROPERTIES		B3	B3-ST		B3-MPA	B3-ST-MPA	This certificate shall not be reproduced except in full without written approval of the RTI International Metals, Inc. lab at which it was prepared. The recording of false, flattery, or fraudulent statements or entries on this document may be punished as a felony under federal law.
ULTIMATE KSI	L	138.7 / 141.5	143.5 / 143.5	1	956 / 975	980 / 989	
YIELD	T	146.3 / 143.9	143.5 / 143.5	1	1008 / 992	980 / 989	
(2%) OFFSET	L	124.0 / 126.5	125.0 / 125.2	1	855 / 872	862 / 863	
% ELONGATION (INCHES)	T	133.5 / 131.1	125.0 / 125.2	1	920 / 904	862 / 863	
% ELONGATION (INCHES)	L	12 / 14	12 / 10	1	12 / 14	12 / 10	
% REDUCTION IN AREA	T	13 / 13	12 / 10	1	13 / 13	12 / 10	
% REDUCTION IN AREA	L	27 / 29	19 / 23	1	27 / 29	19 / 23	
BEND 106	T	30 / 31	19 / 23	1	30 / 31	19 / 23	
HARDNESS	T	360/370 HV 500gF					
BETA TRANSUB CREEP							
ULTRASONIC		ULTRASONICALLY TESTED AND ACCEPTABLE TO AMS 263 ID CL. A1 & PREN 4050-J ED. P1, CL 3; AMS-STD-2154 TYPE I CL. A, DTD 9/05; MSRR 2633 ISSUR 5, AMS 2631C CL.A1, L.C.C. 04.25, 115B CL. A..					
HEAT TREAT/ TEST FORGE		PROD. ANNEAL 1450°F 1 HR. A.C.					

SHIPPING		OTHER DATA:
NO. OF PIECES	1	INGOT WAS MELTED AT RTI-NILES, NILES, OHIO, USA. CHECKED FOR SURFACE CONTAMINATION AND MEETS THE REQUIREMENTS OF THE TEST, MELT METHOD: 2X VAR. MATERIAL SUPPLIED IN ACCORDANCE WITH OUR
WEIGHT (LBS)	1.968.0 (893Kg)	REQUIREMENTS OF THE TEST, MELT METHOD: 2X VAR. MATERIAL SUPPLIED IN ACCORDANCE WITH OUR
SIZE (IN)	2.48 X 4.37 X 99.00	REQUIREMENTS OF THE TEST, MELT METHOD: 2X VAR. MATERIAL SUPPLIED IN ACCORDANCE WITH OUR
TEST PIECES	X X	REQUIREMENTS OF THE TEST, MELT METHOD: 2X VAR. MATERIAL SUPPLIED IN ACCORDANCE WITH OUR
THIS IS TO CERTIFY THAT THE ABOVE TEST RESULTS ARE CORRECT AS CONTAINED IN THE RECORDS OF THE COMPANY AND CONFORM TO ORDER REQUIREMENTS		OF WORKMANSHIP AS THAT WHICH APPLIES TO ANY SIMILAR ARTICLES SUPPLIED TO THE U.S. SERVICE DEPARTMENTS. MATERIAL PRODUCED IN ACCORDANCE WITH THE RMI ISO 9001:2008 AND AS 9100 C APPROVAL. AUSTRIAN U.S. APPROVAL. AUK/BA/20269. PRODUCED AND CONTROLLED IN ACCORDANCE WITH FIXED PROCESS AGREEMENT IN ACCORDANCE WITH ROYCE 9833-1D DTD 5/8/05, RTI/ARBUS #10 DTD 10/1/09, BA/BA/CA/14 DTD 11/8/99. THE CONSTRUCTION MEETS ASTM Q18 FOR PIPER. MICROSTRUCTURE ACCEPTABLE. MATERIAL IS FREE OF MERCURY CONTAMINATION. MATERIAL HAS NO WELD REPAIR. BND USER: RTI-UK STOK. METRIC SIZE: 62.9mm X 112.5mm X 251.4mm.

NAME/TITLE: SHERI HORN, MANAGER OF CERTIFICATION  
 SIGNED: *[Signature]*  
 DATE: 10-31-11