

TEST REPORT

	<input type="checkbox"/> RMI TITANIUM COMPANY 1000 WARREN AVE. NILES, OHIO 44446	DATE	SALES ORDER NO.	GRADE	PACKING LIST NO.
	<input checked="" type="checkbox"/> RTI TRADCO 1701 WEST MAIN ST. WASHINGTON, MO 63090	9/27/10	135381	6A1-4V	80263372
IDENTIFICATION & REFER			CUSTOMER NAME		CUSTOMER ORDER NO.
MATERIAL NUMBER			RTI INTERNATIONAL METALS, LTD.		RMI - 3365 A
PRODUCTION ORDER			MATERIAL H.R. ANN. & CLD. T1 SHEET		
INGOT NO. 8F25179			SPECIFICATION AMS 4911L BS2TA59:2009 MIL-T-9046J AB-1 AM.2		
LOT 05			PREN 3354 EDITION P3 EXCEPT SONIC & BENDS TO AMS 4911L		
S-R 00			AMS-T-9046A AB-1 ASTM B 265-09A E1 GR.5		
30146361			BS3TA10:2009 DIN 65039 DTD 4/1/83		
			WL 3.7164.1 DTD NOV 1990 LN 9297-91		

CHEMISTRY:		<input type="checkbox"/> INGOT (AVERAGE of TOP-CENTER-BOTTOM) <input checked="" type="checkbox"/> INGOT (AVERAGE of TOP-BOTTOM) <input type="checkbox"/> FINAL PRODUCT		TEST INFORMATION		FRACTURE TOUGHNESS MPAV/M	
ELEMENT	TEST	LAB	Specimen Size:	ID	Toughness #	Val. Ck.	
C .007	Chem/Hvd	RTI Tradco, Washington, Mo					
N .006	Balance OF Chem	RTI Titanium, Niles, OH					
Fe .17	Tensile/ASTME 8	RTI Tradco, Washington, Mo					
Al 6.12	Bend/ASTME 290	RTI Tradco, Washington, Mo					
V 3.88	Micro/Surface Cent.						
O .15	ASTME 3-01/ASTME 407	RTI Tradco, Washington, Mo					
Y <SOPPM	Grain Size/ASTME 112-04	RTI Tradco, Washington, Mo					
RESIDUAL ELEMENTS, EACH <.10%							
RESIDUAL ELEMENTS, EACH <.30%							
CHEMISTRY TEST METHODS:							
ALLOY CHEM: SPARK OES							
O2/N2: ASTM E 1409							
HYDROGEN: ASTM B 1447							
CARBON: ASTM E 1941							

PROPERTIES		BALANCE		BEND 180		STATIC NOTCH	
ULTIMATE MPA	L 1007 / 1039						
YIELD MPA	T 1009 / 1026						
(.2%) OFFSET	L 963 / 995						
% ELONGATION (INCHES)	T 970 / 980						
% REDUCTION IN AREA	L 11.5 / 13.4						
	T 10.6 / 12.9						
BEND 105	L 4.50 / 0.00			5.00			
HARDNESS	T 4.50 /			5.00			
BETA TRANSUS							
CREEP							
ULTRASONIC							
HEAT TREAT/	PROD. ANN. 788°C 30 MIN. A.C.						
HEAT FORGE							

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NO. OF PIECES	36PCS	OTHER DATA:
WEIGHT (Kg)	332.27	INGOT WAS MELTED AT RTI-NILES, NILES, OHIO USA. MATERIAL PRODUCED IN ACCORDANCE WITH RMI'S ISO 9001:2000 & AS9100D
SIZE (mm)	1.02 X 1000.00 X 2000.00	APPROVAL: THE ITEMS OF THE TEST CERT. HAVE BEEN INSPECTED & TESTED TO THE SPEC. DETAILED ABOVE & HAVE BEEN FOUND TO CONFORM IN ALL RESPECTS WITH YOUR ORDER. IT IS FURTHER CERTIFIED THAT IT IS TO THE SAME GENERAL STANDARD OF WORKMANSHIP AS THAT WHICH APPLIES TO SIMILAR ARTICLES SUPPLIED TO THE U.S. SERVICE DEPTS. PRODUCED & CONTROLLED IN ACCORDANCE WITH FPA RM/DAE #2B DTD 3/8/05 & BA8/DT-001 DTD 1/28/05. RMI/WESTLAND #10 DTD 3/21/08. MELT METHOD: 2X VAR. BA8/AG0002/MAA. MATERIAL SUPPLIED IN ACCORDANCE WITH OUR BA8/AG/QC/SC PART 3 APPROVAL. PRODUCT CONFORMS TO ALL OTHER TECH. REQUIREMENTS OF THE SPEC. MATERIAL CHECKED FOR SUR. CONT. & MEETS THE REQUIREMENTS OF THE TEST. (ETCHANT: 2% HF / 98% WATER - 100X, 100X & 500X MAG.). MICROSTRUCTURE IS ACCEPTABLE & MEETS THE REQUIREMENTS OF THE TEST. (ETCHANT: 2% HF / 98% WATER - 100X MAG.) 11/17 RA. ACTUAL MICRO GRAIN SIZE IS 12 OR FINER. SHEETS TESTED # 4,8,12,16 & 18 L&T.
TEST PIECES	X X	

APPROVED CERTIFICATE  
SERIAL NO. TO3014

NAME/TITLE: GEORGE SCHREGENGOST, SENIOR EXECUTIVE ADVISOR  
 SIGNED: *[Signature]*  
 For and on behalf of RTI International Metals Inc.  
 DATE: 9-24-10