

Westmoreland Mechanical Testing & Research, Inc.

P.O. Box 388

Westmoreland Drive

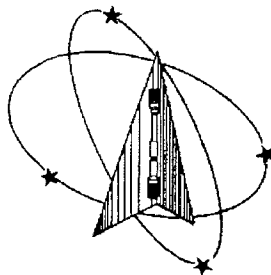
Youngstown, Pa. 15996-0388 U.S.A.

Telephone: 724-537-3131

Fax: 724-537-3151

Website: www.wmtr.com

WMT&R is a technical leader in the material testing industry.



621-01 & 621-02

CERTIFICATION

June 30, 2005

MetalTek International
The Carondelet Division
8600 Commercial Blvd.
I-55 Industrial Park
Pevely, MO 63070-1528

Section 1 of 1

WMT&R Report No. 5-29805

Req. No. 5404

Attention: Rick Suria

Subject: All processes, performed upon the material as received, were conducted at WMT&R, Inc. in accordance with the WMT&R Quality Assurance Manual, Rev. 9, dated 4/1/2000.

The following tests were performed on this order: TENSILE

TENSILE RESULTS: ASTM E21-03a

SOAK TIME: 5 Minutes

SPEED OF TESTING: 0.0030 in./in./min., 0.0500 in./min./in.

MATERIAL: Metaltek CF8MN Mn

C-3 Coil chd

DISPOSITION: Report

Sample	TestLog Number	Temp. °F	UTS ksi	0.2% YS ksi	Elong %	RA %	Modulus Msi	Ult. Load lbf	0.2% YLD. lbf	Orig. Dia. (in.)	Final Dia. (in.)	4D Orig GL (in.)	4D Final GL (in.)	Orig. Area (sq. in.)	Machine Number	AU/R
Z1	C07850	-320	161.7	102.2	45	33	27.0	32600	20611	0.5067	0.4145	2.00	2.89	0.20164697	M9	R
Z2	C07851	-320	164.4	94.9	60	63	24.1	33080	19100	0.5062	0.3096	2.00	3.20	0.20124920	M9	R
Z3	C07852	-320	163.3	94.2	62	56	23.7	32870	18970	0.5063	0.3361	2.00	3.23	0.20132872	M9	R

AU/R: A=ACCEPTABLE, U=UNACCEPTABLE, R=REPORT

KNOWINGLY OR WILLFULLY FALSIFYING OR CONCEALING A MATERIAL FACT ON THIS FORM OR MAKING FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR REPRESENTATIONS HEREIN COULD CONSTITUTE A FELONY PUNISHABLE UNDER FEDERAL STATUTES. THIS CERTIFICATE OR REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF WMT&R, INC.

Testing Specialists for Aerospace, Automotive, and Material Testing Fields
Locations in Youngstown, PA U.S.A. ~ Tel. (724) 537-3131 and
Barbury U.K. ~ Tel. +44 (0) 1295 261211

Matthew J. Patoro
Roy E. Mann Matt W. Patoro
Technical Services Manager Tensile Supervisor

June 30, 2005

2810 Clark Avenue • St. Louis, MO 63103-2574 • (314) 531-8080 • FAX (314) 531-8085
 Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

METALTEK INTERNATIONAL
 8600 Commercial Blvd.
 Pevely, MO 63070

June 24, 2005
 Lab No. 05P-1885
 P.O. No. 12516
 Page 1 of 3

Attention: Chuck Ruud

REPORT OF CHARPY IMPACT TEST

MATERIAL (SAMPLE ID): C3 Coil- Alloy CF8 MNMNMOD, Z1,Z2,Z3
SPECIFICATION: ASTM A 370-03a
SPECIMEN TYPE: "A" Vee Notch
SPECIMEN SIZE: 10 mm x 10 mm
TEMPERATURE OF TEST: 73°F
REQUIREMENTS: 50 ft/ lb

BASE METAL	FOOT LBS.	LATERAL EXPANSION	% SHEAR
Z1-7	193	0.121	100
Z1-8	165	0.100	100
Z1-9	113	0.079	100
Average	157	0.100	100
SAMPLE ID	FOOT LBS.	LATERAL EXPANSION	% SHEAR
Z2-7	144	0.098	100
Z2-8	142	0.070	100
Z2-9	138	0.081	100
Average	141	0.083	100
SAMPLE ID	FOOT LBS.	LATERAL EXPANSION	% SHEAR
Z3-7	132	0.089	100
Z3-8	160	0.098	100
Z3-9	230	0.062	100
Average	174	0.083	100

identification of tested specimen provided by client.

Karl Schmitz
 Karl Schmitz, Director
 Materials Testing



Certificate No. 0397-01
 Certificate No. 0397-02

AN OFFICIAL COPY OF TEST REPORT WILL BE PROVIDED BY THIS LABORATORY ON REQUEST.
 NOT OFFICIAL WITHOUT THE RAISED SEAL OF ST. LOUIS TESTING LABORATORIES, INC.
 SEE REVERSE FOR CONDITIONS.



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Attention: Chuck Ruud

REPORT OF CHARPY IMPACT TEST

MATERIAL (SAMPLE ID): C3 Coil- Alloy CF8 MNMNMOD, Z1,Z2,Z3
SPECIFICATION: ASTM A 370-03a
SPECIMEN TYPE: "A" Vee Notch
SPECIMEN SIZE: 10 mm x 10 mm
TEMPERATURE OF TEST: 77°K
REQUIREMENTS: 35 ft/ lb

BASE METAL	FOOT LBS.	LATERAL EXPANSION	% SHEAR
Z1-7	110	0.086	100
Z1-8	68	0.041	100
Z1-9	104	0.068	90
Average	94	0.065	97
BASE METAL	FOOT LBS.	LATERAL EXPANSION	% SHEAR
Z2-7	92	0.059	90
Z2-8	85	0.052	100
Z2-9	94	0.056	100
Average	90	0.056	97
BASE METAL	FOOT LBS.	LATERAL EXPANSION	% SHEAR
Z3-7	99	0.067	100
Z3-8	148	0.087	100
Z3-9	99	0.076	100
Average	115	0.077	100

Identification of tested specimen provided by client.


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 Page 3 of 3

Attention: CHUCK RUUD

REPORT OF MECHANICAL TESTS

SAMPLE ID: C3 COIL- ALLOY CF8MNMNMOD, Z1, Z2, Z3

Sample ID	Original Area Sq. Inches	Reduced Area Sq. Inches	Reduction in Area %	Modules of Elasticity	Yield Strength PSI	Tensile Strength PSI	Elongation (2.0" Gage Length)	
							in.	%
Z1	0.1963	0.1257	36.0	22.6	37800	83300	0.95	47.5
Z2	0.1963	0.1257	36.0	21.2	42700	83300	0.10	55.0
Z3	0.1924	0.1257	34.7	21.0	34300	81500	0.1	55.0

Round, reduced section tensiles

Yield taken at .2% offset

Tested in accordance with ASTM A 370-03a

Identification of tested specimens provided by the client.

KS/tlv


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