

Westmoreland Mechanical Testing & Research, Inc.
 P.O. Box 388
 Westmoreland Drive
 Youngstown, Pa. 15696-0388 U.S.A.
 Telephone: 724-537-3131 Fax: 724-537-3151
 Website: www.wmtr.com
 WMTR is a technical leader in the material testing industry.

June 23, 2006

CERTIFICATION

Metatek International
 The Carondelet Division
 8600 Commercial Blvd.
 1-55 Industrial Park
 Pevely, MO 63070-1528

Attention: Jim Galaske

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

The following tests were performed on this order: TENSILE

TENSILE RESULTS: ASTM E21-05

Requirements: UTS ksi (Min 85Max →) 0.2% YS ksi (Min 72Max →) 4D Elong. % (Min 32Max →) Modulus Msi (Min 21Max →)

SOAK TIME: 5 Minutes

SPEED OF TESTING: 0.003 in./in./min, 0.05 in./min./in.

MATERIAL: Metatek CF8MNMNMOD

Coil No.	Specimen	Test Log 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	AUUR
B6	Z2	D78484	-320	182.7	112.9	42	47	29.3	9046	5592	0.2511	0.1834	1.00	1.42	0.04952030	M9	A
B6	Z3	D78485	-320	164.3	98.4	51	47	24.1	8147	4880	0.2513	0.1831	1.00	1.51	0.04959922	M9	A
B6	Z1 (R1)	D83725	-320	157.5	98.5	37	46	26.4	7903	4942	0.2528	0.1850	1.00	1.37	0.05019310	M9	A

AUUR: A=ACCEPTABLE, U=UNACCEPTABLE, R=REPORT

DISPOSITION: Acceptable

TENSILE RESULTS: ASTM E21-05

Requirements: UTS ksi (Min 85Max →) 0.2% YS ksi (Min 72Max →) 4D Elong. % (Min 32Max →) Modulus Msi (Min 21Max →)

SOAK TIME: 5 Minutes

SPEED OF TESTING: 0.003 in./in./min, 0.05 in./min./in.

MATERIAL: Metatek CF8MNMNMOD

Coil No.	Specimen	Test Log 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	AUUR
B6	Z1	D78483	-320	152.7	102.1	28	31	28.6	7570	5058	0.2512	0.2082	1.00	1.28	0.04955976	M9	U

AUUR: A=ACCEPTABLE, U=UNACCEPTABLE, R=REPORT

DISPOSITION: Unacceptable

Requirements provided by Metatek International

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

Technical Services Manager
 Roy E. Slawinski
 Tensile Supervisor

June 27, 2006

627-636



Accredited
AMTL
 Materials Testing Laboratory



8

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Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

METALTEK INTERNATIONAL
8600 Commercial Blvd.
Pevely, MO 63070

June 30, 2006
Lab No. 06P-2080
P.O. No. 21324
Page 1 of 3

Attention: CHUCK RUUD

REPORT OF MECHANICAL TESTS

SAMPLE ID: B6- Z1, Z2, Z3

Sample ID	Original Area Sq. Inches	Reduced Area Sq. Inches	Reduction In Area %	Modulus of Elasticity	Yield Strength PSI	Tensile Strength PSI	Elongation (2.0" Gage Length)	
							In.	%
Z1	0.1924	0.1257	34.7	23.6	42700	85700	0.88	44.0
Z2	0.2003	0.1288	35.7	23.1	41700	82900	0.89	44.5
Z3	0.1979	0.1359	31.3	22.8	41900	85400	0.89	44.5

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/tiv

Karl Schmitz, Director
Materials Testing



Certificate No. 0387-01
Certificate No. 0387-02

AN OFFICIAL COPY OF TEST REPORT WILL BE PROVIDED BY THIS LABORATORY ON REQUEST.
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June 30, 2006
 Lab No. 06P-2080
 P.O. No. 21324
 Page 2 of 3

Attention: CHUCK RUUD

REPORT OF CHARPY IMPACT TEST

MATERIAL (SAMPLE ID): B6- 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 / lbs min

BASE METAL	FOOT LBS.	LATERAL EXPANSION	% SHEAR
Z1-7	82	0.048	30
Z1-8	77	0.044	30
Z1-9	75	0.044	30
Average	78	0.045	30
SAMPLE ID	FOOT LBS.	LATERAL EXPANSION	% SHEAR
Z2-7	89	0.047	30
Z2-8	75	0.044	30
Z2-9	77	0.045	30
Average	80	0.045	30
SAMPLE ID	FOOT LBS.	LATERAL EXPANSION	% SHEAR
Z3-7	65	0.040	30
Z3-8	72	0.040	30
Z3-9	79	0.046	30
Average	72	0.042	30

Identification of tested specimen provided by client.

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June 30, 2006
Lab No. 06P-2080
P.O. No. 21324
Page 3 of 3

Attention: **CHUCK RUUD**

REPORT OF CHARPY IMPACT TEST

MATERIAL (SAMPLE ID): B6- Z1, Z2, Z3
SPECIFICATION: ASTM A 370-03a
SPECIMEN TYPE: "A" Vee Notch
SPECIMEN SIZE: 10 mm x 10 mm
TEMPERATURE OF TEST: 293°K
REQUIREMENTS: 50 ft / lbs min

BASE METAL	FOOT LBS.	LATERAL EXPANSION	% SHEAR
Z1-7	120	0.085	60
Z1-8	101	0.072	60
Z1-9	105	0.080	60
Average	109	0.079	60
SAMPLE ID	FOOT LBS.	LATERAL EXPANSION	% SHEAR
Z2-7	110	0.081	60
Z2-8	112	0.082	60
Z2-9	103	0.075	60
Average	108	0.079	60
SAMPLE ID	FOOT LBS.	LATERAL EXPANSION	% SHEAR
Z3-7	101	0.073	60
Z3-8	122	0.089	60
Z3-9	115	0.080	60
Average	113	0.081	60

Identification of tested specimen provided by client.

Karl Schmitz, Director
Materials Testing



Certificate No. 0391-01
Certificate No. 0397-02

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PRODUCT CONFORMANCE REPORT



Product

LNMI 4455

Size(s) mm

1,2

Class.

EN 12072-99: G 20 16 3 Mm L

Lot/Batch

3018513/78308

Item No.

692129

Customer

EUROWELD
MOORESVILLE N.C. 28117
UNITED STATES

Quantity

105,0 KG

Customer ref.

P.O. 05-46

LSW Order No.

SD427896

Chemical analysis (%)

EN10204 2.2

C	Si	Mn	P	S	Cr	Ni	Mo	Cu	N
0,01	0,5	7,3	0,015	0,001	20,3	15,4	2,9	0,1	0,19

Mechanical tests, all weld metal

EN10204 2.2

Tensile testing

Impact testing

Cond.	Temp. °C	Rp0.2 N/mm2	Rm N/mm2	A5 %	Cond.	Temp.1 °C	Av1 J
AW	RT	407	623	41	AW	-196	67

Additional information

EN10204 2.2

Other tests

Remarks

Impact testing (individual values): 70J - 65J - 67J.

The product identified above has been manufactured, tested and supplied in compliance with a Quality Assurance Programme that fulfils the requirements of EN 29000/ISO 9000/BS 5750 or similar standard.

We herewith certify that the product complies with the above-mentioned standards.

Certified ISO 9001:2000.

Company

Lincoln Smitweld B.V.

Registered Office

Nieuwe Dukenburgseweg 20
6534 AD NIJMEGEN

Post address

P.O. Box 253
6500 AG Nijmegen

Issued by

P. Nagels

Telephone

31 24 3522911

Function

QA Administrator

Fax:

31 24 3522200

Date

22/03/2005

Cert.No.

3018513/7830

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METALTEK INTERNATIONAL
8600 Commercial Blvd.
Pevely, MO 63070

August 16, 2005
Lab No. 05P-2532
P.O. No. 21324
Page 1 of 2

Attention: Chuck Ruud

REPORT OF CHARPY IMPACT TEST

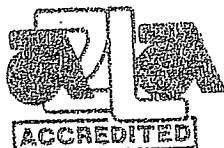
MATERIAL (SAMPLE ID): LNM 4455, LINCOLN LOT 3018513/78308
SPECIFICATION: ASTM A 370-03a
SPECIMEN TYPE: "A" Vee Notch
SPECIMEN SIZE: 10 mm x 10 mm
TEMPERATURE OF TEST: 293°K

BASE METAL	FOOT LBS.	LATERAL EXPANSION	% SHEAR
LNM4455-7	104	0.085	100
LNM4455-8	106	0.093	100
LNM4455-9	99	0.084	100
Average	103	0.087	100

Identification of tested specimen provided by client.


Karl Schmitz, Director
Materials Testing

KS/tlv



Certificate No. 0397-01
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August 16, 2005
Lab No. 05P-2532
P.O. No. 21324
Page 2 of 2

Attention: **CHUCK RUUD**

REPORT OF MECHANICAL TESTS

SAMPLE ID: LNM 4455, LINCOLN LOT 3018513/78308

Sample ID	Original Area Sq. Inches	Reduced Area Sq. Inches	Reduction in Area %	Yield Strength PSI	Tensile Strength PSI	Elongation (2.0" Gage Length)		Modules of Elasticity
						in.	%	
LNM4455	0.1932	0.0866	55.2	65200	95200	0.76	38.0	23.4

Round, reduced section tensiles

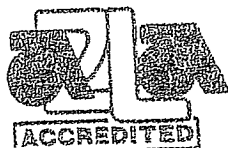
Yield taken at .2% offset

Tested in accordance with ASTM A 370-03a

Identification of tested specimens provided by the client.

KS/tlv

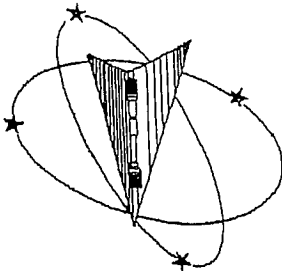

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Materials Testing



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October 18, 2005

MetalTek International
The Camdelt Division
8600 Commercial Blvd.
1-55 Industrial Park
Pevely, MO 63070-1528

Attention: Jim Galaske

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./in./min.

MATERIAL: METALTEK CF8MNNMMOD

Specimen ID	Test Log 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	ALLUR
3018513/78308	C54936	-320	184.9	123.7	33	33	32.8	18470	12350	0.3566	0.2926	1.40	1.86	0.09987403	M9	R

ALLUR: A=ACCEPTABLE, U=UNACCEPTABLE, R=REPORT

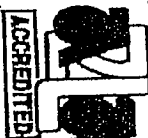
DISPOSITION: Report

Westmoreland Mechanical Testing & Research, Inc.
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Telephone: 724-537-3131 Fax: 724-537-3151
Website: www.wmt.com

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

CERTIFICATION

621-01 & 621-02



Accredited
Material Testing Laboratory

Section 1 of 1
WMT&R Report No. 5-35979
Requisition No. 4972

Roy E. Starnait Wojton
Technical Services Manager

October 18, 2005

10-18-05

14:29 OCT 18, 2005

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METALTEK INTERNATIONAL
8600 Commercial Blvd.
Pevely, MO 63070

October 5, 2005
Lab No. 05P-3096
P.O. No. 21324
Page 1 of 1

Attention: Chuck Ruud

REPORT OF CHARPY IMPACT TEST

MATERIAL (SAMPLE ID): WELD PLATE- 3018513 / 78308
SPECIFICATION: ASTM A 370-03a
SPECIMEN TYPE: "A" Vee Notch
SPECIMEN SIZE: 10 mm x 10 mm
TEMPERATURE OF TEST: -320°F
REQUIREMENTS: minimum 35 ft / lbs.

BASE METAL	FOOT LBS.	LATERAL EXPANSION	% SHEAR
3018513/78308-1	48	0.033	50
3018513/78308-2	65	0.045	50
3018513/78308-3	48	0.033	50
Average	54	0.037	50

Identification of tested specimen provided by client.

KS/tlv


Karl Schmitz, Director
Materials Testing



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