



APM Division de: IMSA-MEX, SA DE CV

Reference: Miprcert1e.Rpt
Date: 15 Mar 2004

Page: 1 of 1

A3141

TEST CERTIFICATE No. MTY 557914

Ship from:

APM Division de: IMSA-MEX, SA DE CV

Churubusco #1000
Col. Santa Fé
Monterrey, Nuevo León 64540
Tel. 8329-5000 Fax: 8329-5024

P/O No. 4500017357

S/O No. MTY 55268 / 22

B/L No. MTY 535424 / 1

Inv No. MTY

Shp. 15/03/2004

Sold to:

(867)

FORTACERO. S. A. DE C. V.
BLVD.CARLOS SALINAS DE GORTARI
KM 8.8

APODACA. NUEVO LEON

RFC: FOR-960524-JP8 66600

Ship to:

FORTACERO. S. A. DE C. V.
BLVD.CARLOS SALINAS DE GORTARI
KM 8.8

APODACA. NL

66600

CERTIFICATE OF ANALYSIS AND TEST

Cert. No. MTY 557914

RC0.500X48.00-A36 RCD.5X4
ROLLO DE AC. ROL. EN CAL.ASTM A36
GaN 12.70 mm x Ancho 1220 mm (GaN 0.5000 in. x Ancho X48.00-A36 RCD.5X4 in.)

Heat	Properties	Tag	Pcs.	Weight	Width
0430553	PCED=42.5-42.5[PCED=293.13(0.00-0.00)] / RTEN=67.8-67.8[RTEN=467.63(0.00-0.00)] / %ELON=38-38 / APRO=<JAESTRAD> / THICKNESS=12.7240	95 688182A ✓	1	17,895	48.4646
0440560	PCED=46[PCED=317.27(0.00-0.00)] / RTEN=69.5[RTEN=479.36(0.00-0.00)] / %ELON=36.8 / APRO=<JOE> / THICKNESS=12.7250	688185A	1	18,230	48.7402

2

36,125

Heat	**** Chemical Analysis ****
0430553	C=0.2 Mn=0.699 Si=0.1509 P=0.0088 S=0.003 Al=0.0463
0440560	C=0.2 Mn=0.628 Si=0.186 P=0.0075 S=0.003 Al=0.0398

THE MECHANICAL TESTS RESULTS ARE IN KPSI [MPa] AND THE PERCENT OF ELONGATION IS IN 2" OF CALIBRATED LENGTH. . FOR ANY QUESTION WE JUST ACCEPT THEM FROM THE CUSTOMER ABOVE MENTIONED AND WITH THE ORIGINAL DOCUMENT. WE HEREBY CERTIFY THAT THE INFORMATION HERE REPORTED IS CORRECT AND EXIST IN THE FILES OF THE COMPANY.

The equipment and test methods used for to get the results above described as apply, are as follows:

- Hardness-ASTM E 18-02- Hardness Tester-LA-E-0002.LA-E-0003
- Cup Erichsen Test- ASTM E 643-84(2000)- T.O. Cup Tester-LA-E-0005
- Tensile Test-ASTM E 8-01,ASTM A 370-01, ASTM E-517-01, ASTM E-646-00
- T.O.Tensile Machine-LA-E-0001, LA-E-0083
- Grain Size- ASTM E 112-96,-Metallurgical Microscope Nikon LA-E-0006
- Non Metallic Inclusions-ASTM E 45-97 - Metallurgical Microscope Nikon LA-E-0006
- Magnetic Properties-ASTM A 343-97- Epstein Tester LA-E-0058

LABORATORY'S CHIEF

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61658



APM Division de: IMSA-MEX, SA DE CV

Reference: Mipcert1e.Rpt
Date: 15 Mar 2004

Page: 1 of 1

TEST CERTIFICATE No. MTY 557926

Ship from:

APM Division de: IMSA-MEX, SA DE CV

Churubusco #1000
Col. Santa Fé

Monterrey, Nuevo León 64540

Tel. 8329-5000 Fax: 8329-5024

P/O No. 4500017357

S/O No. MTY 55268 / 22

B/L No. MTY 535430 / 2

Inv No. MTY

Shp. 15/03/2004

Sold to: (867)

FORTACERO, S. A. DE C. V.

BLVD.CARLOS SALINAS DE GORTARI

KM 8.8

APODACA, NUEVO LEON

RFC: FOR-960524-JP8 66600

Ship to:

FORTACERO, S. A. DE C. V.

BLVD.CARLOS SALINAS DE GORTARI

KM 8.8

APODACA, NL

66600

CERTIFICATE OF ANALYSIS AND TEST

Cert. No. MTY 557926

RC0.500X48.00-A36 RCD.5X4

ROLLO DE AC. ROL. EN CAL.ASTM A36

GaN 12.70 mm x Ancho 1220 mm (GaN 0.5000 in. x Ancho X48.00-A36 RCD.5X4 in.)

Heat	Properties	Tag	Pcs.	Weight	Width
0440559	PCED=50.1-50.1[PCED=345.55(0.00-0.00)] / RTEN=75.8-75.8[RTEN=522.81(0.00-0.00)] / %ELON=32-32 / APRO=<JAESTRAD> / THICKNESS=12.7320	688189A	1	17,685	48.3465

1

17,685

Heat	**** Chemical Analysis ****
0440559	C=0.2 Mn=0.666 Si=0.17 P=0.0077 S=0.004 Al=0.0504

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Cup Erichsen Test- ASTM E 643-84(2000)- T.O. Cup Tester-LA-E-0005

Tensile Test-ASTM E 8-01,ASTM A 370-01, ASTM E-517-01, ASTM E-646-00

- T.O.Tensile Machine-LA-E-0001, LA-E-0083

Grain Size- ASTM E 112-96,-Metallurgical Microscope Nikon LA-E-0006

Non Metallic Inclusions-ASTM E 45-97 - Metallurgical Microscope Nikon LA-E-0006

Magetic Properties-ASTM A 343-97- Epstein Tester LA-E-0058

LABORATORY'S CHIEF

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