



APM Division de: IMSA-MEX, SA DE CV

Reference: Mipcert1e.Rpt
Date: 26 Mar 2004

Page: 1 of 1

A3569

TEST CERTIFICATE No. MTY 560717

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 538476 / 1

Inv No. MTY

Shp. 26/03/2004

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 560717

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 |
|---------|---|---------|------|--------|---------|
| 0410681 | PCED=47.8-47.8[PCED=329.69(0.00-0.00)] / RTEN=71-71[RTEN=489.70(0.00-0.00)] / %ELON=37.7-37.7 / APRO=<JAESTRAD> / THICKNESS=12.7240 | 691303A | 1 | 18,085 | 48.6220 |

1 18,085

| Heat | **** Chemical Analysis **** |
|---------|---|
| 0410681 | C=0.193 Mn=0.742 Si=0.218 P=0.0086 S=0.0061 Al=0.0359 |

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

LABORATORY'S CHIEF

61947