



APM Division de: IMSA-MEX, SA DE CV

Reference: Miprcert1e.Rpt
Date: 15 Mar 2004

Page: 1 of 1

TEST CERTIFICATE No. MTY 557913

A3128

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 535423 / 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 557913

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
0440558	PCED=43.5-43.5[PCED=300.03(0.00-0.00)] / RTEN=68.2-68.2[RTEN=470.39(0.00-0.00)] / %ELON=36.8-36.8 / APRO=<JAESTRAD> THICKNESS=12.7310	688179A <i>plant</i>	1	18,036	48.5039
0430555	PCED=43.6-43.6[PCED=300.72(0.00-0.00)] / RTEN=66.8-66.8[RTEN=460.73(0.00-0.00)] / %ELON=38.4-38.4 / APRO=<JAESTRAD> THICKNESS=12.7140	688180A	1	17,988	48.5827

2

36,024

Heat	**** Chemical Analysis ****
0430555	C=0.19 Mn=0.66 Si=0.184 P=0.0073 S=0.005 Al=0.0475
0440558	C=0.204 Mn=0.657 Si=0.131 P=0.0068 S=0.005 Al=0.0519

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

61668

61669



APM Division de: IMSA-MEX, SA DE CV

TEST CERTIFICATE No. MTY 557937

Ship from:
APM Division de: IMSA-MEX, SA DE CV
Churubusco #1000
Col. Santa Fe
Monterrey, Nuevo León 64540
Tel. 8329-5000 Fax: 8329-5024

P/O No. 4500017357
S/O No. MTY 55268 / 22
B/L No. MTY 535422 / 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 557937

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[PCED=293.13(0.00-0.00)] / RTEN=67.8[RTEN=467.63(0.00-0.00)] / %ELON=38 / APRO=<JOE> / THICKNESS=12.7240	688187A	1	18,220	48.5433

1 18,220

Heat	**** Chemical Analysis ****
0430553	C=0.2 Mn=0.699 Si=0.1509 P=0.0088 S=0.003 Al=0.0463

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