



**Acería Ramos Arizpe**

CARRETERA MONCLOVA KM 4 NUMERO 2125  
 TRAMO SANTA CRUZ OJO CALIENTE  
 C.P./ZIP RAMOS ARIZPE, COAHUILA  
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**CERTIFICADO DE CALIDAD /**

|                                   |                   |
|-----------------------------------|-------------------|
| No. Certificado / Certificate No: | 134750 - 21850911 |
| Fecha / Date:                     | 28/12/2018        |

Hecho en México / Made in Mexico

| DATOS DEL CLIENTE / SOLD TO  | CLIENTE CONSIGNADO / SHIP TO                                     | DATOS DEL EMBARQUE / SHIPPING INFORMATION |
|--|--|---|
| Cliente / Customer: ACEROS TEPOTZOTLAN SA DE CV                                  | Cliente / Customer: ACEROS TEPOSOTLAN SA DE CV                   | Núm. Viaje / Travel No: 134750            |
| Dirección / Address: CARR MEXICO QUERETARO KM 37.5 SN PARQUE INDUSTRIAL CUAMATLA | Dirección / Address: CARRETERA MEXICO.QUERETARO KM 37.5 -        | Núm. Factura / Invoice No: FQ76605        |
| Ciudad / City: CUAUTITLAN IZCALLI Estado / State: EDO. DE MEXICO                 | Ciudad / City: CUAUTITLAN IZCALLI Estado / State: EDO. DE MEXICO | Pedido / Customer Order No: 21850911      |
| Teléfono / Phone: 58727600 País / Country: MEXICO C.P./ZIP 54730                 |  | Núm. Plan / Shipping Plan: 144009         |
| Correo Electrónico / eMail: jgrivera@deacero.com;manuel.ruiz@aceran.com.mx;tes   |  | Fecha Embarque / Date: 28/12/2018         |
|  |  | Orden de Compra / Purchase Order: 1407    |

**COMPOSICIÓN QUÍMICA / CHEMICAL COMPOSITION (% PESO / WEIGHT)**

| Colada / Heat | Secuencia / Sequence | Clave / Code | Producto / Description of Goods          | % C  | % Mn | % Si | % P   | % S   | % Cu | % Cr | % Ni | % Mo  | % Sn  | % Ti  | PPM Nb | PPM N | CE   |
|---------------|----------------------|--------------|--|------|------|------|-------|-------|------|------|------|-------|-------|-------|--------|-------|------|
|               |                      |              |  | AVG  | AVG  | AVG  | AVG   | AVG   | AVG  | AVG  | AVG  | AVG   | AVG   | AVG   | AVG    | AVG   | AVG  |
| 31527         | 39662                | 10498        | CANAL 10" x 15.3 A36/A572-50 12.20m 4.0T | 0.08 | 1.05 | 0.22 | 0.007 | 0.002 | 0.10 | 0.04 | 0.04 | 0.013 | 0.006 | 0.010 | 322    | 83    | 0.27 |
| 31626         | 39663                | 10498        | CANAL 10" x 15.3 A36/A572-50 12.20m 4.0T | 0.21 | 0.91 | 0.22 | 0.013 | 0.014 | 0.20 | 0.06 | 0.06 | 0.018 | 0.008 | 0.008 | 95     | 76    | 0.37 |
| 31626         | 39664                | 10498        | CANAL 10" x 15.3 A36/A572-50 12.20m 4.0T | 0.21 | 0.91 | 0.22 | 0.013 | 0.014 | 0.20 | 0.06 | 0.06 | 0.018 | 0.008 | 0.008 | 95     | 76    | 0.37 |
| 32815         | 39660                | 10498        | CANAL 10" x 15.3 A36/A572-50 12.20m 4.0T | 0.07 | 1.00 | 0.23 | 0.007 | 0.003 | 0.10 | 0.05 | 0.04 | 0.010 | 0.005 | 0.010 | 302    | 86    | 0.25 |

**PROPIEDADES MECÁNICAS / MECHANICAL PROPERTIES**

| Colada / Heat | Secuencia / Sequence | Clave / Code | Producto / Description of Goods          | Calibre / Diameter | Cantidad / Bundle | RT kg/mm <sup>2</sup> | TS PSI  | % Elong / Elong | LF kg/mm <sup>2</sup> | YS PSI  | P. Doble / Bend Test  |
|---------------|----------------------|--------------|--|--------------------|-------------------|-----------------------|---------|-----------------|-----------------------|---------|-----------------------|
|               |                      |              |  |                    |                   | AVG                   | AVG     | AVG             | AVG                   | AVG     |                       |
| 31527         | 39662                | 10498        | CANAL 10" x 15.3 A36/A572-50 12.20m 4.0T | 10" x 15.3         | 3                 | 53.0                  | 75504.3 | 32.3            | 38.9                  | 55411.6 | Cumple / Successfully |
| 31626         | 39663                | 10498        | CANAL 10" x 15.3 A36/A572-50 12.20m 4.0T | 10" x 15.3         | 1                 | 54.8                  | 78051.5 | 34.3            | 39.2                  | 55866.9 | Cumple / Successfully |
| 31626         | 39664                | 10498        | CANAL 10" x 15.3 A36/A572-50 12.20m 4.0T | 10" x 15.3         | 4                 | 53.9                  | 76756.6 | 32.3            | 38.7                  | 55127.0 | Cumple / Successfully |
| 32815         | 39660                | 10498        | CANAL 10" x 15.3 A36/A572-50 12.20m 4.0T | 10" x 15.3         | 1                 | 53.3                  | 75902.8 | 34.4            | 39.4                  | 56194.2 | Cumple / Successfully |

Certificamos que este material ha sido producido, inspeccionado y probado de acuerdo a las normas de fabricación del acero aplicables a la ASTM A36-2008, A529-2005 (re aprobada el 2009), A572-2012 y A992-2011 y a las normas dimensionales NMX B252, ASTM A6/A6M-2012. / We certify that this material has been produced, inspected and tested according to standards applicable steelmaking to ASTM A36-2008, A529-2005 (Reapproved 2009), A572-2012 y A992-2011, and the dimensional standards NMX B252, ASTM A6/A6M-2012.



GUSTAVO GABRIEL MANCILLA GARZA  
 Gerente de Aseguramiento de Calidad / Quality Assurance Manager