



**Acería Ramos Arizpe**  
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 TRAMO SANTA CRUZ OJO CALIENTE  
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**CERTIFICADO DE CALIDAD / CERTIFICATE OF TEST  
 AND ANALYSIS**

|                                   |                   |
|-----------------------------------|-------------------|
| No. Certificado / Certificate No. | 116204 - 21496915 |
| Fecha / Date                      | 12/04/2018        |

**EXCELENCIA EN CALIDAD**

Hecho en México / Made in Mexico

| DATOS DEL CLIENTE / SOLD TO  |                                | CLIENTE CONSIGNADO / SHIP TO  |                                | DATOS DEL EMBARQUE / SHIPPING INFORMATION |  |
|--|--------------------------------|---|--------------------------------|---|--|
| Cliente / Customer: PLESA ANAHUAC Y CIAS SA DE CV                        |                                | Cliente / Customer: MATRIZ TULTITLAN  |                                | Núm. Viaje / Travel No: 116204            |  |
| Dirección / Address: AV VALLE DE LAS ALAMEDAS 66 0 SAN FRANCISCO CHILPAN |                                | Dirección / Address: AV VALLE DE LAS ALAMEDAS 66 0 66 SAN FRANCISCO CHILPAN |                                | Núm. Factura / Invoice No: FQ64964        |  |
| Ciudad / City: TULTITLAN   | Estado / State: EDO. DE MEXICO | Ciudad / City: TULTITLAN  | Estado / State: EDO. DE MEXICO | Pedido / Customer Order No: 21496915      |  |
| Teléfono / Phone: 10838570   |                                | Pais / Country: MEXICO C.P./ZIP 54940                                       |                                | Núm. Plan / Shipping Plan: 118404         |  |
| Correo Electrónico / eMail:  |                                |   |                                | Fecha Embarque / Date: 12/04/2018         |  |
|  |                                |   |                                | Orden de Compra / Purchase Order: 26714   |  |

| 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  | % V    | PPM Nb | PPM N | CE   |
|  |                      |              |   | AVG  | AVG  | AVG  | AVG   | AVG   | AVG  | AVG  | AVG  | AVG   | AVG   | AVG   | AVG    | AVG    | AVG   | AVG  |
| 28010  | 35382                | 60134        | REDONDO S 1 1/4" A-36 P 6.10m 1.5T              | 0.21 | 0.70 | 0.21 | 0.009 | 0.012 | 0.23 | 0.08 | 0.10 | 0.028 | 0.011 | 0.001 | 0.004  | 24     | 73    | 0.34 |
| 26138  | 9525                 | 13157        | REDONDO S 3/4" A-36 P 6.10m 1.5T                | 0.14 | 0.65 | 0.18 | 0.007 | 0.003 | 0.23 | 0.05 | 0.08 | 0.017 | 0.012 | 0.001 | 0.003  | 34     | 96    | 0.26 |
| 26139  | 9523                 | 13157        | REDONDO S 3/4" A-36 P 6.10m 1.5T                | 0.13 | 0.66 | 0.22 | 0.010 | 0.008 | 0.25 | 0.05 | 0.09 | 0.018 | 0.012 | 0.001 | 0.003  | 30     | 90    | 0.26 |
| 26139  | 9524                 | 13157        | REDONDO S 3/4" A-36 P 6.10m 1.5T                | 0.13 | 0.66 | 0.22 | 0.010 | 0.008 | 0.25 | 0.05 | 0.09 | 0.018 | 0.012 | 0.001 | 0.003  | 30     | 90    | 0.26 |
| 26785  | 35202                | 60290        | ANGULO LI 2" x 2" x 3/16" A-36 P 6.10m 2.0T     | 0.21 | 0.73 | 0.19 | 0.008 | 0.010 | 0.21 | 0.06 | 0.07 | 0.015 | 0.010 | 0.001 | 0.0029 | 49     | 89    | 0.35 |
| 27776  | 35208                | 60290        | ANGULO LI 2" x 2" x 3/16" A-36 P 6.10m 2.0T     | 0.21 | 0.70 | 0.20 | 0.007 | 0.020 | 0.24 | 0.06 | 0.09 | 0.019 | 0.012 | 0.001 | 0.0048 | 28     | 86    | 0.34 |
| 28229  | 35504                | 60352        | ANGULO LI 4" x 4" x 1/4" A36/529-50 12.20m 4.0T | 0.21 | 0.91 | 0.19 | 0.006 | 0.003 | 0.18 | 0.05 | 0.07 | 0.016 | 0.009 | 0.012 | 0.0150 | 102    | 100   | 0.38 |

| PROPIEDADES MECÁNICAS / MECHANICAL PROPERTIES |                      |              |   |                    |                   |           |         |                 |           |         |                       |  |
|---|----------------------|--------------|---|--------------------|-------------------|-----------|---------|-----------------|-----------|---------|-----------------------|--|
| Colada / Heat                                 | Secuencia / Sequence | Clave / Code | Producto / Description of Goods                 | Calibre / Diameter | Cantidad / Bundle | RT kg/mm² | TS PSI  | % Elong / Elong | LF kg/mm² | YS PSI  | P. Doble / Bend Test  |  |
|   |                      |              |   |                    |                   | AVG       | AVG     | AVG             | AVG       | AVG     |                       |  |
| 28010   | 35382                | 60134        | REDONDO S 1 1/4" A-36 P 6.10m 1.5T              | 1 1/4"             | 7                 | 50.1      | 71306.5 | 24.7            | 32.2      | 45863.2 | Cumple / Successfully |  |
| 26138   | 9525                 | 13157        | REDONDO S 3/4" A-36 P 6.10m 1.5T                | 3/4"               | 3                 | 51.4      | 73270.2 | 34.4            | 30.6      | 43643.4 | Cumple / Successfully |  |
| 26139   | 9523                 | 13157        | REDONDO S 3/4" A-36 P 6.10m 1.5T                | 3/4"               | 3                 | 48.7      | 69399.7 | 32.3            | 29.5      | 42078.1 | Cumple / Successfully |  |
| 26139   | 9524                 | 13157        | REDONDO S 3/4" A-36 P 6.10m 1.5T                | 3/4"               | 1                 | 49.8      | 70893.8 | 34.3            | 28.8      | 40982.4 | Cumple / Successfully |  |
| 26785   | 35202                | 60290        | ANGULO LI 2" x 2" x 3/16" A-36 P 6.10m 2.0T     | 2" x 2" x 3/16"    | 3                 | 51.6      | 73426.8 | 24.7            | 39.0      | 55511.2 | Cumple / Successfully |  |
| 27776   | 35208                | 60290        | ANGULO LI 2" x 2" x 3/16" A-36 P 6.10m 2.0T     | 2" x 2" x 3/16"    | 7                 | 53.9      | 76728.1 | 24.7            | 35.5      | 50587.6 | Cumple / Successfully |  |
| 28229   | 35504                | 60352        | ANGULO LI 4" x 4" x 1/4" A36/529-50 12.20m 4.0T | 4" x 4" x 1/4"     | 2                 | 53.1      | 75689.3 | 32.7            | 36.8      | 52394.8 | 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 and A992-2011, and the dimensional standards NMX B252, ASTM A6/A6M-2012.



*[Handwritten Signature]*

FRANCISCO JAVIER VARGAS SOTO  
 Gerente de Aseguramiento de Calidad / Quality Assurance Manager