

**CERTIFICADO DE CALIDAD  
INSPECTION CERTIFICATE**  
( DIN EN 10204:2004E - ISO 10474 3.1.B )

Número:  
Number: 22982  
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| Vendido a:<br>Sold to: PLESA ANAHUAC Y CIA. S.A. DE C.V.   | Pedido del Cliente No:<br>Customers Order No: 7234 -   | Lista de Empaque:<br>Packing List: 11724 | Fecha/Date:<br>20 de Noviembre de 2009                       |
| Especificaciones y Grados / Standard or Specification and Steel Grade<br>Seamless Fittings according to ASTM A 234M WPB-07, NACE MR 01.75-2003<br>Conform to ASME II Ed. 2001 ASME SA-234M Grade WPB, NACE MR0103-2003 | Dimensiones y tolerancias / Dimension and tolerances<br>ASME B 16.9 - 2007 and ASME B 16.28 - 1994 |  | Factura/Invoice:<br>Bocas / Ends<br>Biselado / Bevelled ends |

| DESCRIPCION DE MATERIAL / MATERIAL DESCRIPTION |                  |                   |                           | PRUEBAS MECANICAS / MECHANICAL TEST |                                     |            |                     | PRUEBA DE IMPACTO 0°C / IMPACT TEST 0°C |          |          |          |                         |
|--|------------------|-------------------|---------------------------|-------------------------------------|-------------------------------------|------------|---------------------|---|----------|----------|----------|-------------------------|
| ART. ITEM                                      | COLADA HEAT CODE | CANTIDAD QUANTITY | DESCRIPCION / DESCRIPTION | ESF. CEDENCIA YIELD STRENGTH (Mpa)  | ESF. RUPTURA TENSILE STRENGTH (Mpa) | ELONG. %2" | DUREZA HARDNESS HBW | DIMENSIONES SAMPLE DIM mm               | 1 Joules | 2 Joules | 3 Joules | PROMEDIO AVERAGE Joules |
| 1  | S33942           | 228               | CODO 4 X 90° R.L. CED-STD | 317                                 | 484                                 | 32         | 140                 |   |          |          |          |                         |
| 2  | T46005           | 13                | TEE 6 CED-STD             | 306                                 | 473                                 | 44         | 118                 |   |          |          |          |                         |

| ANALISIS QUIMICO / CHEMICAL ANALYSIS |                  |                              |       |       |       |       |       |       |       |       |       |       |       | Certificamos que los resultados de los Análisis Químicos y Pruebas Mecánicas son verdaderos o una copia fiel de los certificados enviados por el Fabricante y/o el proveedor de Materia Prima (Tubería Sin Costura) conforme ASTM A106 Grado B con N°:<br>We certify that result of chemical analysis and mechanical test are true and correct copy of the test certificate issued by the manufacturer and/or supplier Raw material (Seamless Pipe) certs conform to ASTM A106 Grade B N°:<br>480575 9052832<br><br>"Este material cumple con los requerimientos especificados en la orden".<br>"The material of this certificate heat number mentioned above is in compliance with the requirements specified in the order". |       |
|--------------------------------------|------------------|------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|-------|
| PROCESO PROCESS                      | COLADA HEAT CODE | COLADA/HEAT M.P./MOTHER PIPE | %C.E. | %C    | %Mn   | %P    | %S    | %Si   | %Cr   | %Cu   | %Mo   | %Ni   | %V    |   | %Nb   |
| HF                                   | S33942           | 33942                        | 0.320 | 0.180 | 0.730 | 0.014 | 0.001 | 0.290 | 0.040 | 0.069 | 0.010 | 0.032 | 0.001 |   | 0.000 |
| HF                                   | T46005           | 46005                        | 0.300 | 0.170 | 0.660 | 0.016 | 0.002 | 0.290 | 0.040 | 0.053 | 0.018 | 0.030 | 0.002 | 0.000   |       |

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| Notas:<br>Formado en caliente a 620°C-980°C, enfriado al aire; Formado en frío normalizado a 940°C max.<br>Tiempo de permanencia 10'.<br>Inspección Dimensional: Satisfactoria.<br>HF: FORMADO EN CALIENTE/HOT FORMED | Notes:<br>Hot formed fittings in a range from 620°C to 980°C, cooled in still air.<br>Cold formed normalized at 940°C max.<br>Holding time 10'.<br>Visual dimensional check: Satisfactory<br>CF: FORMADO EN FRIO/COLD FORMED | <br><b>Quality Manager / Jefe de Calidad:</b><br><b>ING. WALDO GALLEGOS GALVAN</b> | The Products described herein were produced in accordance with the above referenced specification and are identified with the "R" which is permanently marked on each fitting / The values of hardness for fittings NPS 2 1/2" and smaller ones obtain from the conversion of hardness Rockwell B to hardness Brinell HBW by means of table WILSON DESK CHART 60. Los valores de dureza para conexiones de NPS de 2 1/2" y menores, se obtienen de la conversión de dureza Rockwell B a dureza Brinell HBW mediante la tabla WILSON DESK CHART 60. |
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