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

Numero:  
Number:  
20170

Pagina/Page:  
1 DE 1

Vendido a: PLESA ANAHUAC Y CIA. S. A. DE C. V.  
Pedido del Cliente No: 4482 - 4507  
Customers Order No:  
Dimensiones y tolerancias / Dimension and tolerances  
ASME B 16.9 - 2003 and ASME B 16.28 - 1994

Fecha/Date: 24 de Abril de 2008

Factura/Invoice:  
Bocas / Ends  
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  | S21043           | 108                                 | CODO 4 X 90° R.L. CED-STD  | 353                                | 488                                | 36                                      | 115                 |                           |          |          |          |                         |
| 2  | S23663           | 120                                 | CODO 4 X 90° R.L. CED-STD  | 310                                | 494                                | 35                                      | 121                 |                           |          |          |          |                         |
| 3  | S26551           | 264                                 | CODO 3 X 90° R.L. CED-STD  | 334                                | 485                                | 29                                      | 111                 |                           |          |          |          |                         |
| 4  | T37717           | 100                                 | CODO 6 X 90° R.L. CED-STD  | 275                                | 475                                | 32                                      | 93                  |                           |          |          |          |                         |
| 5  | T38541           | 12                                  | CODO 14 X 90° R.L. CED-STD | 299                                | 486                                | 43                                      | 120                 |                           |          |          |          |                         |
| 6  | T37363           | 30                                  | CODO 6 X 45° CED-STD       | 351                                | 496                                | 39                                      | 94                  |                           |          |          |          |                         |
| 7  | T29807           | 8                                   | CODO 10 X 90° R.L. CED-20  | 340                                | 495                                | 38                                      | 88                  |                           |          |          |          |                         |
| 8  | T38769           | 18                                  | CODO 12 X 90° R.L. CED-STD | 341                                | 503                                | 32                                      | 93                  |                           |          |          |          |                         |
| 9  | T38264           | 12                                  | CODO 10 X 45° CED-STD      | 326                                | 471                                | 33                                      | 106                 |                           |          |          |          |                         |
| 10   | T38264           | 40                                  | CODO 10 X 90° R.L. CED-STD | 326                                | 471                                | 33                                      | 106                 |                           |          |          |          |                         |
| 11   | T27741           | 1                                   | TEE 12 CED-80              | 261                                | 483                                | 35                                      | 123                 |                           |          |          |          |                         |

| ANALISIS QUIMICO / CHEMICAL ANALYSIS |                  |                              |       |       |       |       |       |       |       |       |       |       |       |       |
|--------------------------------------|------------------|------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 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                                   | S21043           | 21043                        | 0.330 | 0.190 | 0.730 | 0.009 | 0.001 | 0.260 | 0.040 | 0.028 | 0.030 | 0.028 | 0.001 | 0.001 |
| HF                                   | S23663           | 23663                        | 0.340 | 0.200 | 0.710 | 0.012 | 0.001 | 0.300 | 0.040 | 0.073 | 0.030 | 0.033 | 0.001 | 0.001 |
| HF                                   | S26551           | 26551                        | 0.310 | 0.180 | 0.720 | 0.011 | 0.001 | 0.280 | 0.040 | 0.023 | 0.010 | 0.015 | 0.001 | 0.000 |
| HF                                   | T37717           | 37717                        | 0.340 | 0.180 | 0.850 | 0.010 | 0.001 | 0.280 | 0.050 | 0.062 | 0.021 | 0.030 | 0.000 | 0.000 |
| HF                                   | T38541           | 38541                        | 0.300 | 0.170 | 0.670 | 0.007 | 0.001 | 0.280 | 0.050 | 0.072 | 0.013 | 0.040 | 0.000 | 0.000 |
| HF                                   | T37363           | 37363                        | 0.310 | 0.170 | 0.700 | 0.008 | 0.001 | 0.270 | 0.070 | 0.052 | 0.039 | 0.030 | 0.000 | 0.000 |
| HF                                   | T29807           | 29807                        | 0.310 | 0.170 | 0.660 | 0.007 | 0.003 | 0.280 | 0.060 | 0.084 | 0.048 | 0.040 | 0.000 | 0.000 |
| HF                                   | T38769           | 38769                        | 0.310 | 0.180 | 0.680 | 0.011 | 0.002 | 0.280 | 0.040 | 0.046 | 0.018 | 0.030 | 0.000 | 0.000 |
| HF                                   | T38264           | 38264                        | 0.290 | 0.170 | 0.660 | 0.011 | 0.001 | 0.250 | 0.040 | 0.047 | 0.007 | 0.030 | 0.000 | 0.000 |
| HF                                   | T38264           | 38264                        | 0.290 | 0.170 | 0.660 | 0.011 | 0.001 | 0.250 | 0.040 | 0.047 | 0.007 | 0.030 | 0.000 | 0.000 |
| HF                                   | T27741           | 27741                        | 0.320 | 0.190 | 0.670 | 0.010 | 0.002 | 0.260 | 0.070 | 0.080 | 0.036 | 0.040 | 0.000 | 0.000 |

Notas:  
Formado en caliente a 620°C-900°C, enfriado al aire; Formado en frío normalizado a 840°C max. (Tiempo de permanencia 10').  
Inspección Dimensional: Satisfactoria.  
HF: FORMADO EN CALIENTE/HOT FORMED CF: FORMADO EN FRIO/COLD FORMED

Notas:  
Hot formed fittings in a range from 620°C to 900°C, cooled in still air.  
Cold formed normalized at 840°C max.  
Holding time 10'.  
Visual dimensional check: Satisfactory  
CF: FORMADO EN FRIO/COLD FORMED

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.

Jefe de Calidad:  
Quality Manager: *[Signature]*

ING. WALDO GALLEGOS GALVAN CC-008

Verificamos que los resultados de los Analisis Quimicos y Pruebas Mecanicas 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°. 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°. 3659003 395555 424210 8007239 8012628 8005884 6038771 8015920 8011658 8011658 6009799

Este material cumple con los requerimientos especificados en la orden". The material of this certificate heat number mentioned above is in compliance with the requirements specified in the order.

## CERTIFICADO DE CALIDAD INSPECTION CERTIFICATE

(DIN EN 10204:2004E - ISO 10474.3.1.B)

Vendido a: PLESA ANAHUAC Y CIA. S.A. DE C.V.  
 Sold to: PLESA ANAHUAC Y CIA. S.A. DE C.V.  
 Especificaciones y Grados / Standard or Specification and Steel Grade  
 Seamless Fittings according to ASTM A 234"WPB-97, A234"WPB-96a, NACE MR 01.75-2003  
 Conform to ASME II Ed. 2001 ASME SA-234"WPB, NACE MRO 103-2003  
 Pedido del Cliente No: 4507 - 4482 -  
 Customers Order No: 10417  
 Dimensiones y tolerancias / Dimension and tolerances  
 ASME B 16.9 - 2003 and ASME B 16.28 - 1994  
 Factura/Invoice: Bocas / Ends  
 Biselado / Bevelled ends  
 Fecha/Date: 24 de Abril de 2008

| ART. ITEM | COLADA HEAT CODE | CANTIDAD QUANTITY | DESCRIPCION / DESCRIPTION | PRUEBAS MECANICAS / MECHANICAL TEST |                                     |            |                     | PRUEBA DE IMPACTO 0°C / IMPACT TEST 0°C |          |          |          |                         |
|-----------|------------------|-------------------|---------------------------|-------------------------------------|-------------------------------------|------------|---------------------|---|----------|----------|----------|-------------------------|
|           |                  |                   |                           | 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 |
| 12        | T36223           | 1                 | CODO 12 X 90° R.I. CED-80 | 281                                 | 482                                 | 42         | 85                  |   |          |          |          |                         |
| 13        | T36927           | 6                 | CODO 12 X 90° R.I. CED-80 | 278                                 | 468                                 | 47         | 100                 |   |          |          |          |                         |
| 14        | T35324           | 5                 | TEE RED. 12 X 6 CED-STD   | 297                                 | 470                                 | 32         | 99                  |   |          |          |          |                         |

| PROCESO PROCESS | COLADA HEAT CODE | COLADA/HEAT M.P./MOTHER PIPE | ANALISIS QUIMICO / CHEMICAL ANALYSIS |       |       |       |       |       |       |       |       |       |       |
|-----------------|------------------|------------------------------|--------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                 |                  |                              | %C                                   | %C.E. | %Mn   | %P    | %S    | %Si   | %Cr   | %Cu   | %Mo   | %Ni   | %V    |
| HF              | T36223           | 36223                        | 0.170                                | 0.310 | 0.680 | 0.013 | 0.001 | 0.270 | 0.060 | 0.019 | 0.030 | 0.000 | 0.000 |
| HF              | T36927           | 36927                        | 0.180                                | 0.310 | 0.660 | 0.009 | 0.001 | 0.270 | 0.040 | 0.033 | 0.030 | 0.000 | 0.000 |
| HF              | T35324           | 35324                        | 0.180                                | 0.320 | 0.690 | 0.010 | 0.003 | 0.280 | 0.050 | 0.027 | 0.050 | 0.000 | 0.000 |

Notas:  
 Formado en caliente a 620°C-880°C, enfriado al aire; Formado en frío normalizado a 940°C max. Tiempo de permanencia 10'.  
 Inspección Dimensional: Satisfactoria.  
 HF: FORMADO EN CALIENTE/HOT FORMED  
 CF: FORMADO EN FRIOCOLD FORMED  
 Visual dimensional check: Satisfactory  
 Holding time 10'.  
 Hot formed fittings in a range from 620°C to 880°C, cooled in still air.  
 Cold formed normalized at 940°C max.  
 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.

Jefe de Calidad:  
Quality Manager:  


Certificamos que los resultados de los Analisis Quimicos y Pruebas Mecanicas son verdaderos o una copia fiel de los certificados enviados por el Fabricante y/o el proveedor de Materia Prima (Tuberia Sin Costura) conforme ASTM A106 Grado B con N°. 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°. 7048265 7054703 7050521

"Este material cumple con los requerimientos especificados en la orden".  
 The material of this certificate heat number mentioned above is in compliance with the requirements specified in the order.