Tubacero
Ave. Guerrero
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# CERTIFICADO DE TUBERIA

## PIPE CERTIFICATE

No.CERTIFICADO(certificate No.): 030207

CLIENTE(customer):
TUBOS, CONEXIONES Y TANQUES, S.A. DE C.V.

DIRECCION(address):
V DE LAS ALAMEDAS # 66-C COL. SAN FCO. CHILPAN. TULTITLAN, EDO. DE MEX.

| O.T. (order no.) | DIAMETRO (outside diam.) | ESPESOR (thickness) | GRADO (grade) | ESPECIFICACION (specification) | PROCESO (process) | PEDIDO (contract) | O. PREPARACION (preparation order) | PROVEEDOR (supplier) | FECHA (date) |
|---|---|---|---|---|---|---|---|---|---|
| 33237 | 10.750" | 0.250" | A-53-B | ASTM | ERW | 5725 | B-030-2003 | AHMSA | 24/04/03 |

| TUBO (pipe) | COLADA (heat) | TYPE | LOC | PRUEBA DE TENSION(tensile test) UNIDADES (units) | ORIENTACION (orientation) | TAMAÑO (size) | | BEND | FARONESS | PRUEBA DE IMPACTO (impact test) °C °F ORIENTACION (orientation) | | | | | TAMAÑO (size) 1/1 | | | | DWTT | | | GRAIN SIZE | (%)ANALISIS QUIMICO / chemical analysis (%) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | PSI (Y.S.) | 1 (T.S.) | 3 % EL. | Y.S/T.S. | | | ENERGY (lbs/ft) 1 | 2 | 3 | AVG | SHEAR AREA 1 | 2 | 3 | AVG | SHEAR AREA 1 | 2 | AVG | | TYPE | LOC | C | Mn | P | S | Si | Al | Cu | Cr | Ni | Mo | Ti | Nb | B | V | N | Als | Ca | PC | CE |
| | | | 6 | | 76850 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 28 | 130550 | H | 7 | 62403 | 73141 | 37 | 0.85 | | | | | | | | | | | | | | | P | 7 | 0.16 | 0.50 | 0.013 | 0.012 | 0.013 | - | 0.02 | 0.020 | 0.033 | 0.007 | 0.002 | 0.001 | | 0.002 | | 0.050 | - | - | - |
| | | | 6 | | 76432 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24 | 130551 | H | 7 | 59773 | 71275 | 37 | 0.85 | | | | | | | | | | | | | | | P | 7 | 0.16 | 0.48 | 0.010 | 0.012 | 0.012 | - | 0.02 | 0.020 | 0.042 | 0.009 | 0.002 | 0.001 | | 0.002 | | 0.044 | - | - | - |
| | | | 6 | | 77412 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 449 | 230550 | H | 7 | 52873 | 69569 | 34 | 0.76 | | | | | | | | | | | | | | | P | 7 | 0.16 | 0.47 | 0.016 | 0.014 | 0.011 | | 0.04 | 0.027 | 0.058 | 0.010 | 0.002 | 0.001 | - | 0.002 | | 0.044 | - | - | - |
| | | | 6 | | 78809 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 475 | 230551 | H | 7 | 61385 | 73303 | 33 | 0.84 | | | | | | | | | | | | | | | P | 7 | 0.15 | 0.46 | 0.020 | 0.015 | 0.011 | | 0.01 | 0.033 | 0.044 | 0.008 | 0.001 | 0.001 | - | 0.002 | | 0.047 | - | - | - |
| | | | 6 | | 79214 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 253 | 430058 | H | 7 | 62051 | 72783 | 38 | 0.85 | | | | | | | | | | | | | | | P | 7 | 0.15 | 0.49 | 0.018 | 0.015 | 0.011 | | 0.05 | 0.036 | 0.050 | 0.011 | 0.001 | 0.001 | - | 0.003 | - | 0.050 | - | | |
| | | | 6 | | 75362 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 186 | 230548 | H | 7 | 52463 | 68773 | 38 | 0.76 | | | | | | | | | | | | | | | P | 7 | 0.15 | 0.48 | 0.019 | 0.013 | 0.009 | | 0.02 | 0.027 | 0.027 | 0.008 | 0.001 | 0.001 | - | 0.002 | - | 0.050 | | | |

PRUEBA HIDROSTATICA (hidrostatic test): PRESION (pressure) 980 Psi TIEMPO (time) 10 SEC

ULTRASONIDO U.T. (ultrasonic): STANDARD DE REFERENCIA (reference standard) G

RAYOS X (RT) (x-ray): PENETROMETRO (penetrometer) N/A

NORMALIZADO DE SOLDADURA (heat treatment weld): TEMPERATURA (temperature) 1600° F

REFERENCE STANDARD: E.U.T. DRILLED HOLE 1/16" / U.T. DRILLED HOLE 1/16"
U.T. NOTCH H.S. / U.T. NOTCH S.S. / RT HOLE 1/16" / RT HOLE 2-1T / RT HOLE 2-1T

ORIENTACION (orientation)
1. TRANSVERSAL (transverse)
2. LONGITUDINAL (longitudinal)
TAMAÑO (size)
3 RECTANGULAR (rectangular) 1½"
4 CILINDRICO (curved bar) 0.500"
5 CILINDRICO (curved bar) 0.450"
LOCALIZACION (location)
6. SOLDADURA (weld)
7. METAL BASE (base metal)
8. ZONA AFECTADA (HAZ)
9. LINEA DE FUSION (fusion line)
TIPO DE PRUEBA (type)
H. COLADA (heat)
P. PRODUCTO (product)
R. RECHAZADO (rejected)

CERTIFICAMOS QUE EL MATERIAL DESCRITO HA SIDO FABRICADO DE ACUERDO CON LAS ESPECIFICACIONES INDICADAS Y QUE LOS RESULTADOS SON CONFORME A LOS REGISTROS DE NUESTRA PLANTA.
WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE SPECIFICATIONS INDICATED AND THAT THE TEST RESULTS ARE AS SHOWN ON THE RECORDS OF OUR COMPANY.

Control de Calidad (Quality Control)

CONTROL DE CALIDAD TUBACERO, S.A. DE C.V. 04