



Tubos de Acero de México, S.A.
Carr. Mty-Laredo Km 24.2
Apartado Postal 43
(65550) C. de Flores, N.L. Méx.
(52) 81 8305 9600 tel
(52) 81 8305 9620 fax

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

Numero:
Number:
2.0257

Pagina/Page:
1 DE 1

Vendido a: PLESA ANAHUAC Y CIA. S.A. DE C.V.
Pedido del Cliente No: 4553 -
Customers Order No:
Listado de Empaque: 1.0461
Packing List:
Fecha/Date: 9 de Mayo de 2008

Dimensiones y tolerancias / Dimension and tolerances
ASME B 16.9 - 2003 and ASME B 16.28 - 1994

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	S26549	228	CODO 4 X 90° R. I. CED-STD	290	474	32	93					
2	T37717	100	CODO 6 X 90° R. I. CED-STD	275	475	32	93					
3	T36427	3	CODO 6 X 45° CED-STD	327	474	38	87					
4	T38887	27	CODO 6 X 45° CED-STD	309	462	41	93					
5	T37479	1	CODO 10 X 45° CED-STD	288	474	33	100					
6	T37796	6	CODO 10 X 45° CED-STD	341	480	38	96					
7	T38263	2	CODO 10 X 45° CED-STD	340	495	30	122					
8	T38264	3	CODO 10 X 45° CED-STD	326	471	33	106					

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	S26549	26549	0.320	0.180	0.750	0.014	0.001	0.300	0.050	0.032	0.010	0.015	0.001	0.001
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	T36427	36427	0.310	0.180	0.670	0.013	0.002	0.300	0.050	0.080	0.026	0.030	0.000	0.000
HF	T38887	38887	0.290	0.160	0.660	0.010	0.002	0.280	0.070	0.060	0.021	0.040	0.000	0.000
HF	T37479	37479	0.300	0.170	0.670	0.009	0.001	0.270	0.040	0.061	0.020	0.030	0.000	0.000
HF	T37796	37796	0.300	0.170	0.670	0.010	0.002	0.260	0.040	0.051	0.010	0.040	0.000	0.000
HF	T38263	38263	0.320	0.180	0.690	0.010	0.002	0.250	0.070	0.058	0.021	0.060	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

Notas:
Formado en caliente a 620°C-960°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

Notes:
Hot formed fittings in a range from 620°C to 960°C, cooled in still air.
Cold formed normalized at 940°C max.
Holding time 10'.
Visual dimensional check: Satisfactory
CF: FORMADO EN FRIOCOLD FORMED

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.

Verdadero 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°. 420901 8007239 7049705 8018388 8000526 8002701 8011658 8011658

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.

Quality Manager / Jefe de Calidad:
ING. WALDO GALLEGOS GALVAN