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

Tenaris

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

Numero: Number:	Pagina/Page:
27226	4

Vendido a: Sold to: PLESA ANAHUAC Y CIA. S.A. DE C.V.

Pedido del Cliente No: Customers Order No: 14833 - 14222 - 14336 -

Lista de Empaque: Packing List: 14113

Fecha/Date: 22 de Marzo de 2013

Especificaciones y Grados / Standard or Specification and Steel Grade
Seamless Fittings according to ASTM A 234 WPB-07, NACE MR 01.75-2003
Conform to ASME II Ed. 2001 ASME SA-234,Grade WPB, NACE MR0103-2003

Dimensiones y tolerancias / Dimension and tolerances
ASME B 16.9 - 2007

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
34	T5295	80	CODO 4 X 45° CED-XS	312	485	33	151					
35	T62782	5	RED. CONC. 12 X 6 CED-STD	368	509	30	142					
36	T13612	1	TEE 5 CED-STD	303	457	41	122					
37	T63735	1	TEE 5 CED-STD	315	486	36	147					
38	T25993	4	TEE 5 CED-STD	302	470	34	109					
39	T63735	6	TEE 5 CED-XS	315	488	38	141					
40	S25633	40	CODO 2 X 90° R.C. CED-XS	316	491	30	184					

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	T5295	5295	0.310	0.170	0.770	0.006	0.001	0.320	0.020	0.026	0.007	0.020	0.000	0.000
CF	T62782	62782	0.330	0.180	0.750	0.012	0.002	0.260	0.050	0.057	0.026	0.030	0.000	0.000
HF	T13612	13612	0.310	0.180	0.660	0.009	0.003	0.270	0.030	0.056	0.024	0.040	0.000	0.000
HF	T63735	63735	0.290	0.160	0.660	0.016	0.001	0.270	0.050	0.080	0.022	0.030	0.000	0.000
HF	T25993	25993	0.320	0.180	0.680	0.007	0.003	0.280	0.050	0.070	0.027	0.030	0.000	0.000
HF	T63735	63735	0.300	0.170	0.670	0.017	0.002	0.280	0.050	0.080	0.023	0.030	0.000	0.000
HF	S25633	25633	0.330	0.190	0.740	0.012	0.003	0.280	0.040	0.040	0.010	0.016	0.002	0.002

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 Nº:
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 suplier Raw material (Seamless Pipe) certs conform to ASTM A106 Grade B Nº:

12090297 12081102 4003295 13011325 5029389 13006443 12088061

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

Notas:
Formado en caliente a 620°C-980°C, enfriado al aire; Formado en frio normalizado a 940°C max.
Tiempo de permanencia 10'.
Inspección Dimensional: Satisfactoria.
HF: FORMADO EN CALIENTE/HOT FORMED

Notes:
Hot formed fittings in a range from 620°C to 980°C, cooled in still air,
Cold formed nomalized at 940°C max.
Holding time 10'.
Visual dimensional check: Satisfactory
CF: FORMADO EN FRIO/COLD FORMED

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

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.