Tenaris

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

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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

Vendido a: / Sold to: PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: / Customers Order No: 3758	Lista de Empaque: / Packing List: 9905	Fecha/Date: 16 de Noviembre de 2007

Especificaciones y Grados / Standard or Specification and Steel Grade

Seamless Fittings according to ASTM A 234"M" WPB-97, A234"M" WPB-05a, NACE MR 01.75-2003

Conform to ASME II Ed. 2001 ASME SA-234"M", Grade WPB.

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	T35601	20	CODO 12 X 90° R.L. CED-40	318	491	46	88					
2	T25670	2	CODO 12 X 45° SHC-80	301	481	45	116					
3	T32654	1	CODO 12 X 45° SHC-80	268	472	34	89					
4	T35002	7	CODO 12 X 45° SHC-80	286	484	42	84					
5	T32654	3	CODO 12 X 90° R.L. CED-80	268	472	34	89					
6	T35795	21	CODO 12 X 90° R.L. CED-80	294	476	48	84					
7	T32653	3	CODO 12 X 90° R.L. CED-80	295	483	46	84					
8	S48250	18	CODO 5 X 90° R.C. CED-XS	280	461	36	130					
9	S22137	1	CODO 5 X 90° R.C. CED-XS	316	505	32	141					
10	T13369	1	CODO 5 X 90° R.C. CED-XS	322	478	40	140					
11	S22135	30	CODO 2 X 90° R.C. CED-STD	341	505	32	142					

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	T35601	35601	0.310	0.170	0.680	0.010	0.001	0.290	0.060	0.072	0.034	0.030	0.000	0.000
HF	T25670	25670	0.310	0.170	0.690	0.009	0.002	0.300	0.060	0.096	0.037	0.040	0.000	0.000
HF	T32654	32654	0.330	0.190	0.670	0.009	0.002	0.270	0.060	0.067	0.046	0.040	0.000	0.000
HF	T35002	35002	0.320	0.180	0.700	0.010	0.002	0.270	0.050	0.072	0.021	0.030	0.000	0.000
HF	T32654	32654	0.330	0.190	0.670	0.009	0.002	0.270	0.060	0.067	0.046	0.040	0.000	0.000
HF	T35795	35795	0.310	0.180	0.680	0.009	0.001	0.290	0.040	0.046	0.021	0.030	0.000	0.000
HF	T32653	32653	0.330	0.190	0.690	0.008	0.001	0.250	0.060	0.069	0.048	0.040	0.000	0.000
HF	S48250	48250	0.320	0.190	0.720	0.008	0.002	0.280	0.020	0.022	0.010	0.014	0.001	0.001
HF	S22137	22137	0.386	0.166	0.819	0.000	0.007	0.001	0.299	0.046	0.064	0.040	0.025	0.001
HF	T13369	13369	0.310	0.170	0.690	0.014	0.001	0.280	0.060	0.054	0.037	0.030	0.000	0.000
HF	S22135	22135	0.330	0.180	0.800	0.012	0.001	0.280	0.040	0.022	0.010	0.017	0.001	0.001

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 (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:

7048512 5030191 7002945 7048489 7002945 7048258 7048258 350930 152477 03017637 380581

"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:	Notes:
Formado en caliente a 620°C-980°C, enfriado al aire; Formado en frio normalizado a 940°C max.	Hot formed fittings in a range from 620°C to 980°C, cooled in still air, Cold formed nomalized at 940°C max.
Tiempo de permanencia 10'.	Holding time 10'.
Inspección Dimensional: Satisfactoria.	Visual dimensional check: Satisfactory
HF: FORMADO EN CALIENTE/HOT FORMED	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:

ING. JOSE MARTINEZ MACIAS

CC-008