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)

Número: Number:	Página/Page:
23261	1 DE 1

Vendido a: Sold to: PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No: 7685 - 7719 - 7873 - 7693 - 7413 -	Lista de Empaque: Packing List: 11879	Fecha/Date: 12 de Marzo de 2010
Especificaciones y Grados / Standard or Specification and Steel Grade **Seamless Fittings according to ASTM A 234M WPB-07, NACE MR 01.75-2003** **Conform to ASME II Ed. 2001 ASME SA-234M Grade WPB, NACE MR0103-2003**	Dimensiones y tolerancias / Dimension and tolerances **ASME B 16.9 - 2007 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
12	T47231	10	CODO 8 X 90° R.L. CED-STD	304	478	38	120					
13	T48082	13	CODO 8 X 90° R.L. CED-STD	310	478	38	120					
14	T42699	6	TEE RED. 8 X 6 CED-STD	331	522	32	123					
15	S24951	5	CODO 6 X 90° R.C. CED-XS	256	443	36	95					
16	S25531	25	CODO 6 X 90° R.C. CED-XS	279	467	38	97					
17	T46857	4	TEE RED. 8 X 4 CED-STD	327	499	41	126					
18	T42161	4	TEE RED. 6 X 3 CED-STD	332	495	33	94					
19	T39958	30	TEE RED. 6 X 4 CED-STD	319	487	43	104					
20	T47856	1	CODO 12 X 90° R.L. CED-80	300	478	42	120					

PLESA ANAHUAC Y CIAS. S.A. DE C.V.
CONTROL DE CALIDAD
FECHA 16 Mar 2010
E513
FIRMA E. RUIZ

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	T47231	47231	0.310	0.180	0.650	0.012	0.001	0.280	0.040	0.054	0.023	0.030	0.000	0.000
HF	T48082	48082	0.310	0.180	0.650	0.008	0.002	0.280	0.040	0.068	0.020	0.030	0.000	0.000
HF	T42699	42699	0.340	0.190	0.810	0.018	0.001	0.290	0.040	0.066	0.022	0.030	0.000	0.000
HF	S24951	24951	0.320	0.190	0.700	0.011	0.001	0.270	0.050	0.044	0.010	0.020	0.001	0.001
HF	S25531	25531	0.310	0.180	0.710	0.011	0.002	0.300	0.050	0.036	0.010	0.026	0.001	0.001
HF	T46857	46857	0.310	0.180	0.660	0.012	0.004	0.290	0.050	0.080	0.029	0.040	0.000	0.000
HF	T42161	42161	0.310	0.180	0.670	0.016	0.001	0.280	0.040	0.050	0.009	0.020	0.000	0.000
HF	T39958	39958	0.310	0.180	0.670	0.009	0.002	0.270	0.050	0.058	0.007	0.030	0.000	0.000
HF	T47856	47856	0.330	0.180	0.780	0.007	0.002	0.270	0.050	0.078	0.025	0.030	0.000	0.000

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:
9063911 10007842 9007744 418145 418145 9063904 9005348 8040184 10007043

"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 frío 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

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.