Tenaris

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

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Vendido a: Sold to: PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No: 5624 - 5628	Lista de Empaque: Packing List: 11187	Fecha/Date: 16 de Enero de 2009
Especificaciones y Grados / Standard or Specification and Steel Grade **Seamless Fittings according to ASTM A 234"M" WPB-07, A234"M" WPB-05a, NACE MR 01.75-2003** **Conform to ASME II Ed. 2001 ASME SA-234"M",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
23	S32203	27	CODO 6 X 90° R.L. CED-XS	293	480	32	111					
24	T42416	13	CODO 6 X 90° R.L. CED-XS	306	470	38	116					
25	T42417	20	CODO 8 X 45° CED-STD	307	461	34	103					
26	T42417	60	CODO 8 X 90° R.L. CED-STD	307	461	34	103					
27	T40298	12	TEE 10 CED-STD	305	477	36	119					
28	S38904	2	CODO 5 X 90° R.L. CED-XS	332	487	39	116					
29	T22635	6	CODO 5 X 90° R.L. CED-XS	311	455	46	103					
30	S37410	12	CODO 5 X 90° R.L. CED-XS	335	476	40	139					
31	T42162	40	TEE 6 CED-STD	241	443	36	115					
32	T41315	4	CODO 12 X 45° SHC-80	266	461	42	127					
33	T41644	13	TEE RED. 8 X 4 CED-STD	297	474	43	118					

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	S32203	32203	0.330	0.180	0.790	0.010	0.001	0.290	0.050	0.039	0.010	0.016	0.001	0.001
HF	T42416	42416	0.310	0.170	0.700	0.012	0.001	0.280	0.040	0.060	0.023	0.040	0.000	0.000
HF	T42417	42417	0.290	0.160	0.670	0.012	0.001	0.280	0.040	0.046	0.018	0.030	0.000	0.000
HF	T42417	42417	0.290	0.160	0.670	0.012	0.001	0.280	0.040	0.046	0.018	0.030	0.000	0.000
HF	T40298	40298	0.320	0.190	0.670	0.007	0.003	0.280	0.050	0.079	0.023	0.040	0.000	0.000
HF	S38904	38904	0.313	0.170	0.780	0.009	0.002	0.280	0.030	0.024	0.020	0.021	0.001	0.001
HF	T22635	22635	0.310	0.170	0.680	0.008	0.000	0.270	0.050	0.070	0.044	0.030	0.000	0.000
HF	S37410	37410	0.308	0.170	0.720	0.014	0.001	0.290	0.040	0.038	0.030	0.018	0.001	0.001
HF	T42162	42162	0.300	0.170	0.670	0.012	0.002	0.280	0.040	0.046	0.008	0.020	0.000	0.000
HF	T41315	41315	0.340	0.190	0.830	0.011	0.003	0.280	0.040	0.055	0.007	0.030	0.000	0.000
HF	T41644	41644	0.320	0.180	0.710	0.010	0.003	0.280	0.050	0.057	0.006	0.030	0.000	0.000

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:

468606 9002595 8066837 8066837 8062567 261678 5013270
257541 9002593 8054171 8062578

"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 frío 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.