

# tenaris

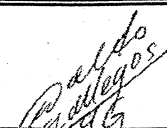
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<b>CERTIFICADO DE CALIDAD</b> <b>INSPECTION CERTIFICATE</b> ( DIN EN 10204:2004E - ISO 10474 3.1.B )	Numero: Number:  22273	Pagina/Page:  1 DE 1
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Vendido a: Sold to: PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No: 5942 - 5931 - 5949 - 5950 - 5952	Lista de Empaque: Packing List: 11321	Fecha/Date: 4 de Marzo de 2009
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 <b>ASME B 16.9 - 2007 and ASME B 16.28 - 1994</b>		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	T42416	26	CODO 6 X 45° CED-XS	306	470	38	116					
2	S28276	24	CODO 6 X 45° CED-XS	326	482	33	89					
3	S31103	264	CODO 3 X 90° R.L. CED-STD	304	510	29	116					
4	T42774	100	CODO 6 X 90° R.L. CED-STD.	328	499	39	126					
5	T42699	4	TEE 8 CED-STD	334	525	34	123					
6	T42339	4	TEE 8 CED-STD	301	482	35	102					
7	T42774	12	CODO 6 X 45° CED-STD	328	499	39	126					
8	T42080	30	CODO 6 X 45° CED-STD	321	523	35	100					
9	T42081	38	CODO 6 X 45° CED-STD	310	505	33	102					
10	T42416	40	CODO 6 X 90° R.L. CED-XS	306	470	38	116					
11	T42773	6	CODO 8 X 45° CED-STD	365	494	34	106					

ANALISIS QUIMICO / CHEMICAL ANALYSIS															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 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°: 9002595 433163 456783 9001510 9007700 9002331 9001510 8063336 9010384 9002595 9002848  "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".
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	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	S28276	28276	0.330	0.190	0.720	0.008	0.001	0.270	0.040	0.029	0.020	0.029	0.001	0.001	
HF	S31103	31103	0.330	0.180	0.760	0.010	0.001	0.290	0.050	0.066	0.010	0.026	0.001	0.000	
HF	T42774	42774	0.310	0.180	0.670	0.015	0.003	0.260	0.040	0.068	0.022	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	T42339	42339	0.300	0.170	0.670	0.010	0.003	0.280	0.050	0.070	0.008	0.030	0.000	0.000	
HF	T42774	42774	0.310	0.180	0.670	0.015	0.003	0.260	0.040	0.068	0.022	0.030	0.000	0.000	
HF	T42080	42080	0.320	0.180	0.680	0.009	0.000	0.260	0.060	0.063	0.023	0.040	0.000	0.000	
HF	T42081	42081	0.310	0.180	0.650	0.012	0.002	0.290	0.040	0.058	0.016	0.030	0.000	0.000	
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	T42773	42773	0.310	0.180	0.670	0.016	0.001	0.260	0.040	0.071	0.023	0.030	0.000	0.000	

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 normalized at 940°C max. Holding time 10'. Visual dimensional check: Satisfactory CF: FORMADO EN FRIO/COLD FORMED
 <b>Quality Manager / Jefe de Calidad:</b> <b>ING. WALDO GALLEGOS GALVAN</b>	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.