Tenaris

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

Numero: Number:	Pagina/Page:
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Vendido a: Sold to: PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No: 5406 - 5345 - 5405	Lista de Empaque: Packing List: 11045	Fecha/Date: 21 de Noviembre de 2008

Especificaciones y Grados / Standard or Specification and Steel Grade	Dimensiones y tolerancias / Dimension and tolerances	**Factura/Invoice:**
Seamless Fittings according to ASTM A 234"M" WPB-07, A234"M" WPB-05a, NACE MR 01.75-2003		**Bocas / Ends**
Conform to ASME II Ed. 2001 ASME SA-234"M",Grade WPB, NACE MR0103-2003	**ASME B 16.9 - 2007 and ASME B 16.28 - 1994**	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	S31625	264	CODO 3 X 90° R.L. CED-STD	331	510	32	124					
2	T15180	20	CODO 6 X 90° R.C. CED-STD	357	498	31	118					
3	T29863	7	CODO 6 X 45° CED-STD	342	476	36	99					
4	S27575	5	CODO 6 X 45° CED-STD	320	483	37	90					
5	S49625	1	CODO 6 X 45° CED-STD	306	478	36	88					
6	S27576	2	CODO 6 X 45° CED-STD	331	489	37	92					
7	S31051	100	CODO 2 X 90° R.L. CED-STD	333	501	30	118					
8	S21171	15	CODO 2 1/2 X 90° R.L. CED-STD	327	500	31	122					
9	S46693	38	CODO 2 1/2 X 90° R.L. CED-STD	337	486	32	133					
10	S22312	15	CODO 2 1/2 X 90° R.L. CED-STD	324	498	30	123					
11	T42086	100	CODO 8 X 90° R.L. CED-STD	270	434	36	129					

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	S31625	31625	0.310	0.170	0.750	0.012	0.002	0.260	0.040	0.034	0.010	0.016	0.001	0.001
HF	T15180	15180	0.000	0.170	0.680	0.010	0.006	0.280	0.050	0.168	0.042	0.060	0.000	0.000
HF	T29863	29863	0.320	0.180	0.680	0.007	0.002	0.280	0.050	0.067	0.030	0.030	0.000	0.000
HF	S27575	27575	0.330	0.180	0.790	0.009	0.002	0.290	0.050	0.036	0.010	0.017	0.001	0.001
HF	S49625	49625	0.340	0.190	0.790	0.012	0.003	0.290	0.040	0.042	0.010	0.018	0.001	0.002
HF	S27576	27576	0.340	0.190	0.830	0.009	0.001	0.290	0.040	0.032	0.010	0.018	0.001	0.002
HF	S31051	31051	0.320	0.190	0.730	0.009	0.001	0.260	0.030	0.025	0.010	0.012	0.001	0.001
HF	S21171	21171	0.310	0.180	0.740	0.010	0.001	0.290	0.010	0.018	0.010	0.010	0.001	0.002
HF	S46693	46693	0.320	0.180	0.720	0.013	0.001	0.270	0.050	0.038	0.010	0.025	0.001	0.001
HF	S22312	22312	0.320	0.180	0.750	0.011	0.001	0.300	0.030	0.019	0.010	0.011	0.001	0.002
HF	T42086	42086	0.300	0.170	0.670	0.009	0.001	0.280	0.050	0.064	0.011	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:
460632 8024843 7033023 428894 353493 428894 458124 369597 329515 379462 8058416

"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

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.

CC-008