



Tenaris

**CERTIFICADO DE CALIDAD
-INSPECTION CERTIFICATE-**

(DIN EN 10204:2004E - ISO 10474 3.1.B)

Tubos de Acero de México, S.A.
Carr. Mty-Laredo Km. 24.2
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Numero:
Number:
18774

Página/Page:
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Fecha/Date:
19 de Septiembre de 2007

Lista de Empaque:
Packing List:
9652

Pedido del Cliente No:
Customers Order No:
5113 - 5114

Proveedor: PROVEEDORA DE MATERIALES ANKER, S.A.
DE C.V.

Dimensiones y tolerancias / Dimension and tolerances
ASME B 16.9 - 2003 and ASME B 16.28 - 1994

Dimensiones y tolerancias / Dimension and tolerances
ASME B 16.9 - 2003 and ASME B 16.28 - 1994

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. CEBENCIA YIELD STRENGTH (Mpa)	ESF. RUPTURA TENSILE STRENGTH (Mpa)	ELONG. %2'	DUREZA HARDNESS HB	DIMENSIONES SAMPLE DIM mm	1 Joules	2 Joules	3 Joules	PROMEDIO AVERAGE Joules
1	S22162	228	CODO 4 X 90° R.I. CED-STD	329	478	35	110					
2	S47792	152	CODO 3 X 90° R.I. CED-STD	313	474	30	125					
3	S21171	112	CODO 3 X 90° R.I. CED-STD	295	472	33	119					
4	T34179	37	CODO 6 X 90° R.I. CED-STD	368	515	31	89					
5	T35302	63	CODO 6 X 90° R.I. CED-STD	339	504	40	91					
6	T33853	6	CODO 16 X 90° R.I. CED-XS	318	488	42	87					
7	T33784	30	RED. CONC. 10 X 8 CED-STD	335	500	32	86					
8	S22620	200	CODO 2 X 90° R.I. CED-STD	355	514	26	128					
9	T33784	30	RED. CONC. 10 X 6 CED-STD	335	500	32	86					
10	S22475	100	RED. CONC. 4 X 3 CED-STD	326	506	34	145					
11	T34180	26	RED. CONC. 6 X 4 CED-STD	325	501	38	106					

ANALISIS QUIMICO / CHEMICAL ANALYSIS														
PROCESO	COLADA HEAT CODE	COLADAH/HEAT M.P./MOTHER PIPE	%C.E.	%C	%Mn	%P	%S	%SI	%Cr	%Cu	%Mo	%Ni	%V	%Nb
HF	S22162	22162	0.320	0.180	0.740	0.010	0.001	0.260	0.040	0.018	0.010	0.011	0.001	0.002
HF	S47792	47792	0.340	0.190	0.730	0.013	0.001	0.290	0.050	0.030	0.050	0.017	0.001	0.001
HF	S21171	21171	0.330	0.200	0.700	0.010	0.002	0.290	0.020	0.020	0.010	0.016	0.001	0.003
HF	T34179	34179	0.320	0.180	0.670	0.010	0.002	0.260	0.060	0.083	0.026	0.040	0.000	0.000
HF	T35302	35302	0.350	0.180	0.860	0.012	0.002	0.310	0.060	0.067	0.037	0.040	0.000	0.000
HF	T33853	33853	0.310	0.180	0.680	0.008	0.002	0.280	0.040	0.060	0.030	0.030	0.000	0.000
CF	T33784	33784	0.350	0.190	0.770	0.009	0.003	0.270	0.060	0.064	0.042	0.040	0.000	0.000
HF	S22620	22620	0.330	0.190	0.760	0.013	0.001	0.270	0.050	0.033	0.010	0.022	0.001	0.002
CF	T33784	33784	0.350	0.190	0.770	0.009	0.003	0.270	0.060	0.064	0.042	0.040	0.000	0.000
CF	S22475	22475	0.330	0.190	0.800	0.009	0.001	0.260	0.030	0.028	0.010	0.020	0.001	0.001
CF	T34180	34180	0.320	0.170	0.750	0.008	0.001	0.270	0.050	0.070	0.025	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 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) certis conform to ASTM A106 Grade B N°. 379771 339273 369592 7038411 7038411 7025882 7026680 392238 7026680 380958 7035325

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.

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