



CERTIFICADO DE CALIDAD INSPECTION CERTIFICATE (DIN EN 10204:2004E - ISO 10474 3.1.B)		Numero: Number: 19394	Pagina/Page: 1 DE 1	Tubbs de Acero de Mexico, 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 9600 fax
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Vendido a: Sold to:	Pedido del Cliente No: Customers Order No:	Lista de Empaque: Packing List:	Fecha/Date:
Especificaciones y Grados / Standard or Specification and Steel Grade Seamless Fittings according to ASTM A 234 "M" WPB-97, A234 "L" WPB-06a, NACE MR 01-76-2003 Conform to ASME II Ed. 2001 ASME SA-234 "M", Grade WPB.	Dimensiones y tolerancias / Dimension and tolerances ASME B 16.9 - 2003 and ASME B 16.28 - 1994	9991	13 de Diciembre de 2007

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	T34687	10	RED. CONC. 12 X 10 CED-STD	344	489	34	84					
13	T36140	150	RED. CONC. 6 X 4 CED-STD	306	476	42	107					
14	T27497	3	RED. CONC. 8 X 6 CED-XS	331	498	46	113					
15	T29678	9	RED. CONC. 8 X 6 CED-XS	324	472	39	114					
16	T32973	8	RED. CONC. 8 X 6 CED-XS	299	466	37	86					
17	S22135	100	CODO 1 1/2 X 45° CED-STD	365	529	48	137					
18	S22920	100	CODO 4 X 45° CED-XS	297	476	32	105					
19	T22409	20	CODO 5 X 45° CED-XS	304	452	44	116					
20	T36223	12	CODO 12 X 90° R.L. CED-80	281	482	42	85					
21	T32653	8	CODO 12 X 90° R.L. CED-80	295	483	46	84					
22	T27925	4	RED. CONC. 8 X 5 CED-STD	281	474	35	117					

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
CF	T34687	34687	0.330	0.190	0.740	0.009	0.002	0.280	0.070	0.084	0.030	0.030	0.000	0.000
CF	T36140	36140	0.310	0.170	0.670	0.006	0.002	0.280	0.050	0.069	0.039	0.040	0.000	0.000
CF	T27497	27497	0.300	0.170	0.660	0.011	0.002	0.300	0.050	0.070	0.017	0.030	0.000	0.000
CF	T29678	29678	0.310	0.180	0.650	0.008	0.001	0.270	0.040	0.076	0.026	0.040	0.000	0.000
CF	T32973	32973	0.330	0.190	0.680	0.010	0.001	0.270	0.060	0.054	0.032	0.040	0.000	0.000
HF	S22135	22135	0.320	0.170	0.800	0.011	0.001	0.300	0.040	0.024	0.010	0.017	0.001	0.002
HF	S22920	22920	0.310	0.180	0.720	0.012	0.001	0.270	0.030	0.029	0.010	0.036	0.001	0.000
HF	T22409	22409	0.300	0.170	0.670	0.007	0.000	0.270	0.040	0.054	0.017	0.030	0.000	0.000
HF	T36223	36223	0.310	0.170	0.680	0.013	0.001	0.270	0.060	0.079	0.019	0.030	0.000	0.000
HF	T32653	32653	0.330	0.190	0.690	0.008	0.001	0.250	0.060	0.069	0.048	0.040	0.000	0.000
CF	T27925	27925	0.310	0.170	0.670	0.016	0.002	0.290	0.080	0.093	0.032	0.060	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) cuts conform to ASTM A106 Grade B N°.

7037387 7044552 6008082 7011123 7037594 385336 392294 5013693 7048265 7046258 6009631

"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".

Nota: Formado en caliente a 620°C-650°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 CF: FORMADO EN FRIO/COLD FORMED	Notes: Hot formed flange in a range from 620°C to 650°C, cooled in still air. Cold formed normalized at 940°C max. Holding time 10'. Visual dimensional check. Satisfactory	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.
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Jefe de Calidad:
Quality Manager:
ING. JOSE MARTINEZ MACIAS CC-008



FECHA: 16 JULIO 2007
FIRMA:

LAVISIA, S.A. DE C.V.
ORDEN _____
PART. No. _____
REFERENCIA: 30711