



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

Numero:
Number:
19776

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Tubos de Acero de México, 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 9620 fax

Vendido a: PROVEEDORA DE MATERIALES ANKER, S.A.
DE C.V.

Pedido del Cliente No: 5153
Customers Order No:

Lista de Empaque: 10201
Packing List:

Fecha/Date: 13 de Febrero de 2008

Especificaciones y Grados / Standard or Specification and Steel Grade
Seamless Fittings according to ASTM A 234"M" WPB-97, A234"M" WPB-05a, NACE MR 01.75-2003
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

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
12	T36427	46	RED. CONC. 6 X 3 CED-STD	315	485	40	90					
13	T36140	54	RED. CONC. 6 X 3 CED-STD	306	476	42	107					
14	T27497	5	RED. CONC. 8 X 6 CED-XS	331	498	46	113					
15	T29678	17	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	S38130	39	RED. CONC. 2 X 1 1/4 CED-STD	347	489	39	134					
18	S25296	11	RED. CONC. 2 X 1 1/4 CED-STD	349	491	35	126					
19	T33902	168	CODO 1 X 90° R.L. CED-XS	294	418	54	135					
20	T21227	100	CODO 1 X 45° CED-STD	289	417	51	122					
21	T33435	10	RED. CONC. 10 X 4 CED-STD	336	490	35	91					
22	T27741	4	TEE RED. 12 X 6 CED-80	261	483	35	123					

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	T36427	36427	0.300	0.170	0.680	0.010	0.001	0.290	0.040	0.075	0.027	0.030	0.000	0.000
CF	T36140	36140	0.310	0.170	0.670	0.006	0.002	0.280	0.050	0.089	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	0.000	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
CF	S38130	38130	0.313	0.180	0.710	0.009	0.001	0.280	0.030	0.043	0.020	0.022	0.001	0.001
CF	S25296	25296	0.324	0.180	0.790	0.010	0.002	0.290	0.030	0.040	0.010	0.020	0.001	0.001
HF	T33902	33902	0.280	0.149	0.564	0.012	0.001	0.191	0.052	0.049	0.022	0.039	0.000	0.000
HF	T21227	21227	0.290	0.160	0.650	0.008	0.001	0.250	0.050	0.018	0.040	0.017	0.000	0.000
CF	T33435	33435	0.310	0.180	0.680	0.010	0.001	0.270	0.040	0.058	0.031	0.030	0.000	0.000
HF	T27741	27741	0.320	0.180	0.670	0.010	0.002	0.260	0.070	0.080	0.036	0.040	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°: 7048259 7044552 6008084 7011123 7037594 258860 165671 5892 6613 7049534 6009799

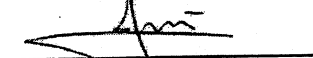
We certify that result of chemical analysis and mechanical test are true and correct copy of the test certificate issued by the manufacturer and/or supplier Raw material (Seamless Pipe) certs conform to ASTM A106 Grade B N°: 7048259 7044552 6008084 7011123 7037594 258860 165671 5892 6613 7049534 6009799

"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".

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

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