



Tubos de Acero de México, S.A.
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**CERTIFICADO DE CALIDAD
INSPECTION CERTIFICATE**

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

Vendido a: PLESA ANAHUAC Y CIA. S.A. DE C.V. Sold to:		Pedido del Cliente No: 2327 - 2390 - Customers Order No:		Fecha/Date: 30 de Enero de 2007	
Especificaciones y Grados / Standard or Specification and Steel Grade Seamless Fittings according to ASTM A 234-97, A 234-05a, NACE MR 01.75-2003 Conform to ASME II Ed. 2001 ASME SA-234, Grade WPB		Dimensiones y tolerancias / Dimension and tolerances ASME B 16.9 - 2003 and ASME B 16.28 - 1994		Lista de Empaque: 8849 Packing List:	
				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 HB	DIMENSIONES SAMPLE DIM mm	1 Joules	2 Joules	3 Joules	PROMEDIO AVERAGE Joules
1	T29076	15	CODO 12 X 45° CED-XS	335	495	34	97					
2	T27436	1	TEE 8 CED-XS	333	472	33	106					
3	T29890	4	TEE 8 CED-XS	255	477	37	88					
4	T31956	15	TEE 8 CED-XS	305	484	46	120					
5	T32653	8	TEE RED. 8 X 6 CED-STD	276	483	37	91					
6	T26553	8	TEE 10 CED-STD	318	486	42	120					
7	T29529	4	TEE 10 CED-STD	344	498	34	122					
8	T29530	12	TEE 10 CED-STD	389	486	34	105					

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	T29076	29076	0.320	0.180	0.710	0.010	0.002	0.280	0.050	0.083	0.029	0.040	0.000	0.000
HF	T27436	27436	0.300	0.160	0.670	0.010	0.001	0.270	0.070	0.078	0.037	0.030	0.000	0.000
HF	T29890	29890	0.320	0.180	0.730	0.007	0.001	0.300	0.050	0.057	0.024	0.030	0.000	0.000
HF	T31956	31956	0.320	0.190	0.660	0.011	0.003	0.270	0.060	0.048	0.039	0.030	0.000	0.000
HF	T32653	32653	0.320	0.180	0.690	0.009	0.002	0.270	0.060	0.073	0.049	0.040	0.000	0.000
HF	T26553	26553	0.320	0.180	0.690	0.010	0.002	0.290	0.050	0.051	0.028	0.050	0.000	0.000
HF	T29529	29529	0.320	0.190	0.650	0.012	0.003	0.280	0.050	0.083	0.026	0.040	0.000	0.000
HF	T29530	29530	0.310	0.180	0.660	0.008	0.003	0.280	0.040	0.068	0.027	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 (Tuberia 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°.

6026405 6015521 6037652 7000244 7002118 6036130
6036076 7000739

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 máx.
Tiempo de permanencia 10'.
Inspección Dimensional: Satisfactoria.
CF: 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 máx.
Holding time 10'.
Visual dimensional check: Satisfactory
CF: FORMADO EN FRIJO/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