

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

Numero:  
Number:  
17560

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Tubos de Acero de México, S.A.  
Carr. Mty-Earedo Km 24.2  
Apartado Postal 43  
(65550) C. de Flores, N.L. Méx.  
(52) 81 8305 9600 tel  
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Vendido a: Sold to:	PROVEEDORA DE MATERIALES ANKER, S.A. DE C.V.	Pedido del Cliente No: Customers Order No:	5053 - 5021 -	Lista de Empaque: Packing List:	8974	Fecha/Date:	14 de Marzo 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				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	T33052	300	CODO 8 X 90° R.L. CED-STD	283	472	35	89					
2	T31365	10	RED. CONC. 10 X 4 CED-STD	398	501	30	95					
3	T45656	400	CODO 1 X 45° CED-STD	304	449	50	135					
4	T28028	340	CODO 1 X 90° R.L. CED-XS	302	430	53	114					

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	T33052	33052	0.340	0.180	0.830	0.009	0.001	0.260	0.050	0.055	0.023	0.040	0.000	0.000
CF	T31365	31365	0.300	0.170	0.660	0.008	0.001	0.270	0.050	0.069	0.033	0.030	0.000	0.000
HF	T45656	45656	0.279	0.187	0.452	0.006	0.002	0.235	0.041	0.042	0.020	0.029	0.000	0.000
HF	T28028	28028	0.270	0.150	0.580	0.011	0.001	0.200	0.040	0.091	0.030	0.047	0.001	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°: 7007622 7011046 T-6206/1 T-4961/1

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°: 7007622 7011046 T-6206/1 T-4961/1

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.

<p>Notas:</p> <p>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.</p> <p>HF: FORMADO EN CALIENTE/HOT FORMED</p>	<p>Notes:</p> <p>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.</p> <p>CF: FORMADO EN FRIO/COLD FORMED</p>
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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