



**CERTIFICADO DE CALIDAD
INSPECTION CERTIFICATE**
(DIN EN 10204:2004E - ISO 10474.3.1.B)

Tubos de Acero de México, S.A.
Carr. My-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 ANCEP, S.A. DE C.V. Especificaciones y Grados / Standard or Specification and Steel Grade Seamless Fittings according to ASTM A 234 WP, A 234 WP-B, A 234 WP-C, NACE MR 0175-2003 Conform to ASME II Ed. 2001 ASME SA-234 WP, NACE MR0103-2003	Pedido del Cliente No: 5231 Customers Order No: Dimensiones y tolerancias / Dimension and tolerances	Numero: 20682 Number: 1 DE 1 Pagina/Page: 1 DE 1	Fecha/Date: 23 de Julio de 2008
ASME B 16.9 - 2003 and ASME B 16.28 - 1994	Lista de Empaque: 1 0 6 6 0 Packing List:	Factura/Invoice: Bocas / Ends Biselado / Bevelled ends	

ART. ITEM	COLADA HEAT CODE	CANTIDAD QUANTITY	DESCRIPCION / DESCRIPTION	PRUEBAS MECANICAS / MECHANICAL TEST				PRUEBA DE IMPACTO 0°C / IMPACT TEST 0°C			
				ESF. CEBENCIA YIELD STRENGTH (Mpa)	ESF. RUPTURA TENSILE STRENGTH (Mpa)	ELONG %2"	DUREZA HARDNESS HBW	1 Joules	2 Joules	3 Joules	PROMEDIO AVERAGE Joules
1	T37920	39	TEE 4 CED-STD	323	495	42	120				
2	T36431	61	TEE 4 CED-STD	307	482	42	93				
3	T39855	30	TEE 8 CED-XS	276	466	48	128				
4	S21394	800	COUO 2 X 90° R. I. CED-STD	458	679	29	133				
5	T40182	18	COUO 8 X 45° CED-STD	311	491	39	95				
6	T40183	32	COUO 8 X 45° CED-STD	314	492	39	122				

PROCESO PROCESS	COLADA HEAT CODE	COLADA/HEAT M.P. MOTHER PIPE	ANALISIS QUIMICO / CHEMICAL ANALYSIS											
			%C.E.	%C	%Mn	%P	%S	%Si	%Cr	%Cu	%Mo	%Ni	%V	%Nb
HF	T37920	37920	0.310	0.180	0.680	0.008	0.002	0.260	0.040	0.053	0.022	0.030	0.000	0.000
HF	T36431	36431	0.310	0.170	0.700	0.011	0.002	0.280	0.050	0.066	0.022	0.030	0.000	0.000
HF	T39855	39855	0.300	0.170	0.680	0.012	0.002	0.280	0.040	0.056	0.008	0.030	0.000	0.000
HF	S21394	21394	0.310	0.180	0.720	0.011	0.001	0.260	0.030	0.036	0.010	0.021	0.001	0.001
HF	T40182	40182	0.310	0.170	0.680	0.013	0.002	0.270	0.070	0.063	0.009	0.030	0.000	0.000
HF	T40183	40183	0.290	0.160	0.670	0.011	0.001	0.260	0.070	0.064	0.009	0.030	0.000	0.000

Notas:
 Formado en caliente a 820°C-860°C, enfriado al aire, Formado en frío normalizado a 940°C max.
 Tiempo de permanencia 10'.
 Inspección Dimensional: Satisfactoria.
 Visual dimensional check: Satisfactory

Notas:
 Hot formed fittings in a range from 820°C to 860°C, cooled in still air.
 Cold formed normalized at 940°C max.
 Holding time 10'.
 Visual dimensional check: Satisfactory

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.

Los Productos descritos herein were produced in accordance with the above referenced specification and are identified with the "R" which is permanently marked on each fitting. The values of hardness for fittings NPS 2 1/2" and smaller ones obtain from the conversion of hardness Rockwell B to hardness Brinell HBW by means of table WILSON DESK CHART 60.
 Los valores de dureza para conexiones de NPS de 2 1/2" y menores, se obtienen de la conversión de dureza Rockwell B a dureza Brinell HBW mediante la tabla WILSON DESK CHART 60.

vendidos 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) certs conform to ASTM A106 Grade B N°.
 8018377 8018377 8034743 3732275 8037660 8038926

ING. WALDO GALLEGOS GALVAN