



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

<b>CERTIFICADO DE CALIDAD INSPECTION CERTIFICATE</b> (DIN EN 10204:2004E - ISO 10474 3.1.B)		Numero: Number:  25108	Pagina/Page:  2
--	--	---------------------------------	-----------------------

Vendido a: Sold to: PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No: 11177 - 11409 - 11325	Lista de Empaque: Packing List: 12955	Fecha/Date: 10 de Noviembre de 2011
Especificaciones y Grados / Standard or Specification and Steel Grade Seamless Fittings according to ASTM A 234 WPB-07, NACE MR 01.75-2003 Conform to ASME II Ed. 2001 ASME SA-234, Grade WPB, NACE MR0103-2003	Dimensiones y tolerancias / Dimension and tolerances <b>ASME B 16.9 - 2007 and ASME B 16.28 - 1994</b>		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	T36428	1	CODO 8 X 90° R.L. CED-STD	338	477	39	89					
13	T56640	119	CODO 8 X 90° R.L. CED-STD	293	468	39	120					
14	T54713	49	TEE 6 CED-STD	322	494	40	122					
15	T49830	1	TEE 6 CED-STD	354	512	30	110					
16	T54815	5	TEE RED. 12 X 8 CED-STD	347	481	48	124					
17	T54644	8	TEE RED. 8 X 4 CED-STD	315	488	38	120					
18	T39854	2	TEE RED. 8 X 4 CED-STD	290	470	43	101					
19	S45917	70	CODO 2 X 90° R.C. CED-XS	329	493	30	116					
20	T55033	2	TEE RED. 12 X 10 CED-STD	346	485	48	120					
21	T52743	1	TEE RED. 12 X 10 CED-STD	316	490	34	130					
22	T47680	2	TEE RED. 12 X 10 CED-STD	297	470	34	112					

ANALISIS QUIMICO / CHEMICAL ANALYSIS															Certificamos que los resultados de los Análisis Químicos y Pruebas Mecánicas 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) certs conform to ASTM A106 Grade B N°: 7050506 11043876 11028784 10034288 11019822 11016577 8069915 11029701 11028792 11007834 10018315 "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".
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	T36428	36428	0.300	0.170	0.690	0.010	0.000	0.280	0.040	0.045	0.010	0.030	0.000	0.000	
HF	T56640	56640	0.300	0.170	0.670	0.014	0.001	0.270	0.040	0.053	0.018	0.030	0.000	0.000	
HF	T54713	54713	0.320	0.180	0.700	0.008	0.002	0.260	0.050	0.080	0.015	0.040	0.000	0.000	
HF	T49830	49830	0.330	0.180	0.820	0.012	0.002	0.330	0.030	0.066	0.026	0.030	0.000	0.000	
HF	T54815	54815	0.310	0.180	0.670	0.007	0.001	0.290	0.060	0.054	0.020	0.030	0.000	0.000	
HF	T54644	54644	0.310	0.180	0.670	0.007	0.003	0.280	0.050	0.072	0.023	0.050	0.000	0.000	
HF	T39854	39854	0.320	0.190	0.690	0.011	0.001	0.290	0.040	0.052	0.006	0.020	0.000	0.000	
HF	S45917	45917	0.320	0.180	0.740	0.009	0.001	0.320	0.040	0.025	0.020	0.019	0.002	0.002	
HF	T55033	55033	0.310	0.170	0.680	0.008	0.001	0.270	0.070	0.035	0.023	0.030	0.000	0.000	
HF	T52743	52743	0.320	0.180	0.660	0.009	0.001	0.280	0.060	0.071	0.041	0.040	0.000	0.000	
HF	T47680	47680	0.300	0.170	0.670	0.013	0.001	0.290	0.040	0.078	0.021	0.030	0.000	0.000	

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	 <b>Quality Manager / Jefe de Calidad:</b> <b>ING. WALDO GALLEGOS GALVAN</b>	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 / 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.
---	--	--	---