



Tubbs 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 )	Número: Number:	Página/Page:
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Vendido a: Sold to:	PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No:	7488 - 7371 - 7468 - 7469 - 7414 - 7413	Lista de Empaque: Packing List:	11793	Fecha/Date:	6 de Enero de 2010
Especificaciones y Grados / Standard or Specification and Steel Grade Seamless Fittings according to ASTM A 234M WPB-07, NACE MR 01.75-2003 Conform to ASME II Ed. 2001 ASME SA-234M Grade WPB, NACE MR0103-2003		Dimensiones y tolerancias / Dimension and tolerances ASME B 16.9 - 2007 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
1	S32858	228	CODO 4 X 90° R.L. CED-STD	319	491	32	135					
2	T46926	100	CODO 6 X 90° R.L. CED-STD.	355	496	39	117					
3	T42699	1	TEE 8 CED-STD	331	522	32	98					
4	T42339	7	TEE 8 CED-STD	308	480	34	98					
5	T42417	28	TEE 4 CED-STD	306	481	39	126					
6	T43468	6	TEE 6 CED-XS	293	472	44	95					
7	S31052	40	CODO 2 X 90° R.L. CED-XS	326	495	31	120					
8	T43299	20	CODO 8 X 45° CED-STD	326	480	34	109					
9	T42773	14	CODO 8 X 90° R.L. CED-STD	365	494	34	108					
10	T47231	16	CODO 8 X 90° R.L. CED-STD	304	478	38	120					
11	S31050	300	CODO 1 1/2 X 90° R.L. CED-STD.	367	534	32	130					

PLESA ANAHUAC Y CIA. S.A. DE C.V.  
CONTROL DE CALIDAD  
FECHA: 07/Ene/2010  
02000059  
FIRMA: Enrique Ruiz

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	
PROCESO PROCESS	COLADA HEAT CODE	COLADA/HEAT M.P./MOTHER PIPE	%C.E.	%C	%Mn	%P	%S	%Si	%Cr	%Cu	%Mo	%Ni	%V		
HF	S32858	32858	0.310	0.170	0.730	0.012	0.001	0.280	0.040	0.060	0.010	0.028	0.001	0.000	
HF	T46926	46926	0.310	0.170	0.690	0.010	0.003	0.290	0.040	0.063	0.038	0.030	0.000	0.000	
HF	T42699	42699	0.350	0.190	0.840	0.018	0.001	0.320	0.040	0.062	0.023	0.020	0.000	0.000	
HF	T42339	42339	0.300	0.170	0.670	0.010	0.003	0.280	0.050	0.070	0.008	0.030	0.000	0.000	
HF	T42417	42417	0.310	0.180	0.680	0.015	0.003	0.280	0.040	0.058	0.023	0.030	0.000	0.000	
HF	T43468	43468	0.300	0.170	0.670	0.016	0.002	0.280	0.050	0.047	0.012	0.030	0.000	0.000	
HF	S31052	31052	0.320	0.180	0.740	0.009	0.001	0.260	0.040	0.035	0.010	0.020	0.001	0.001	
HF	T43299	43299	0.310	0.170	0.700	0.011	0.001	0.270	0.050	0.057	0.014	0.040	0.000	0.000	
HF	T42773	42773	0.310	0.180	0.670	0.016	0.001	0.260	0.040	0.071	0.023	0.030	0.000	0.000	
HF	T47231	47231	0.310	0.180	0.650	0.012	0.001	0.280	0.040	0.054	0.023	0.030	0.000	0.000	
HF	S31050	31050	0.330	0.190	0.760	0.007	0.002	0.270	0.030	0.023	0.010	0.013	0.001	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 nomalized 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./ 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. Quality Manager/Jefe de Calidad: ING. WALDO GALLEGOS GALVAN
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