

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

Número:
Number:

23705

Página/Page:

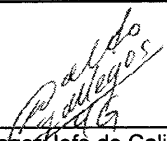
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Tubbs de Acero de México, S.A.
Carr. Mty-Laredo Km 24.2
Apartado Postal 43
(65550) C. de Flores, N.L. Méx.
(52) 81 8305 9600 tel
(52) 81 8305 9620 fax

Vendido a: Sold to:	PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No:	8701	Lista de Empaque: Packing List:	12133	Fecha/Date:	13 de Agosto 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
12	T29613	1	TEE RED. 8 X 6 CED-XS	307	486	32	91					
13	T45889	9	TEE RED. 8 X 6 CED-XS	305	490	43	122					
14	T37155	1	TEE RED. 6 X 3 CED-STD	327	471	37	96					
15	T49220	17	TEE RED. 6 X 3 CED-STD	303	467	40	120					
16	T41351	1	TEE RED. 6 X 3 CED-STD	280	479	35	120					
17	T41487	1	TEE RED. 6 X 3 CED-STD	259	478	34	101					
18	T47392	5	TEE RED. 12 X 6 CED-STD	332	490	43	116					
19	T46857	10	TEE RED. 8 X 4 CED-XS	316	488	40	122					
20	T48705	12	CODO 12 X 90° R.L. CED-80	297	482	45	118					
21	T41862	6	RED. CONC. 16 X 10 CED-XS	303	464	39	107					
22	GY5	10	CODO 3 1/2 X 90° R.L. CED-XS	379	510	39	139					

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°: 6036110 9052910 7056138 10025863 8048839 8054918 10007329 10017089 10015259 9060596 02008530 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	T29613	29613	0.310	0.160	0.710	0.010	0.002	0.280	0.060	0.077	0.032	0.050	0.000	0.000	
HF	T45889	45889	0.320	0.190	0.690	0.011	0.002	0.290	0.030	0.066	0.011	0.030	0.000	0.000	
HF	T37155	37155	0.300	0.170	0.680	0.011	0.002	0.290	0.060	0.039	0.015	0.020	0.000	0.000	
HF	T49220	49220	0.300	0.170	0.670	0.011	0.003	0.280	0.030	0.066	0.020	0.030	0.000	0.000	
HF	T41351	41351	0.300	0.180	0.670	0.010	0.003	0.320	0.030	0.054	0.008	0.030	0.000	0.000	
HF	T41487	41487	0.310	0.180	0.680	0.012	0.001	0.290	0.040	0.057	0.007	0.030	0.000	0.000	
HF	T47392	47392	0.310	0.180	0.680	0.009	0.002	0.280	0.050	0.066	0.023	0.030	0.000	0.000	
HF	T46857	46857	0.310	0.180	0.660	0.011	0.003	0.300	0.040	0.077	0.029	0.040	0.000	0.000	
HF	T48705	48705	0.310	0.180	0.670	0.010	0.002	0.290	0.040	0.058	0.019	0.030	0.000	0.000	
CF	T41862	41862	0.300	0.180	0.660	0.009	0.002	0.300	0.040	0.042	0.013	0.020	0.000	0.000	
HF*	GY5	96324	0.332	0.190	0.700	0.008	0.002	0.280	0.050	0.063	0.042	0.040	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	 Quality Manager / Jefe de Calidad: ING. WALDO GALLEGOS GALVAN	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.
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