



Tubbs de Acero de México, S.A.
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CERTIFICADO DE CALIDAD INSPECTION CERTIFICATE (DIN EN 10204:2004E - ISO 10474 3.1.B)		Numero: Number:	Pagina/Page:
		26022	1

Vendido a: Sold to:	PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No:	12701 - 13213 - 12529 - 11325	Lista de Empaque: Packing List:	13508	Fecha/Date:	13 de Julio de 2012
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 ASME B 16.9 - 2007			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	T60505	7	TEE 6 CED-XS	247	450	39	141					
2	T59519	30	RED. CONC. 10 X 8 CED-STD	304	473	35	146					
3	T59684	30	RED. CONC. 10 X 6 CED-STD	356	468	30	136					
4	T57394	24	RED. CONC. 6 X 4 CED-STD	294	478	38	149					
5	T60763	26	RED. CONC. 6 X 4 CED-STD	320	486	38	145					
6	T60717	6	CODO 12 X 90° R.L. CED-40	312	480	33	144					
7	T59684	6	RED. CONC. 10 X 4 CED-XS	296	462	39	148					
8	T48110	5	CODO 12 X 45° CED-40	324	468	37	143					
9	T46857	1	CODO 12 X 45° CED-40	331	502	41	124					
10	S47799	42	CODO 2 X 45° CED-XS	319	480	30	142					
11	S45917	18	CODO 2 X 45° CED-XS	328	492	30	124					

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	T60505	60505	0.310	0.170	0.660	0.014	0.001	0.280	0.060	0.080	0.026	0.040	0.000	0.000
CF	T59519	59519	0.310	0.180	0.660	0.017	0.001	0.300	0.040	0.077	0.012	0.040	0.000	0.000
CF	T59684	59684	0.310	0.180	0.660	0.017	0.002	0.280	0.060	0.071	0.023	0.040	0.000	0.000
CF	T57394	57394	0.300	0.170	0.670	0.009	0.001	0.260	0.050	0.076	0.026	0.030	0.000	0.000
CF	T60763	60763	0.310	0.170	0.680	0.014	0.002	0.280	0.060	0.070	0.027	0.040	0.000	0.000
HF	T60717	60717	0.300	0.170	0.680	0.012	0.004	0.280	0.040	0.067	0.021	0.030	0.000	0.000
CF	T59684	59684	0.310	0.180	0.660	0.015	0.000	0.280	0.060	0.073	0.023	0.040	0.000	0.000
HF	T48110	48110	0.310	0.180	0.670	0.010	0.003	0.290	0.030	0.077	0.023	0.030	0.000	0.000
HF	T46857	46857	0.310	0.180	0.650	0.011	0.003	0.300	0.050	0.080	0.029	0.040	0.000	0.000
HF	S47799	47799	0.300	0.170	0.710	0.009	0.001	0.280	0.030	0.039	0.010	0.018	0.001	0.002
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

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°:

12029336 12036719 12027538 12012256 12036717 12030247
12018753 11052253 9063906 11048473 11029703

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".

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
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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./ 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.