



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

CERTIFICADO DE CALIDAD INSPECTION CERTIFICATE (DIN EN 10204:2004E - ISO 10474 3.1.B)		Numero: Number: 25527	Pagina/Page: 2
--	--	---------------------------------	-----------------------

Vendido a: Sold to: PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No: 205694 -	Lista de Empaque: Packing List: 13176	Fecha/Date: 6 de Marzo 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
12	S32203	10	CODO 5 X 90° R.L. CED-STD	302	495	34	133					
13	S31159	2	CODO 5 X 90° R.L. CED-STD	304	492	34	137					
14	S32858	10	CODO 5 X 90° R.L. CED-STD	282	469	33	137					
15	S42828	17	CODO 5 X 90° R.L. CED-STD	307	473	36	101					
16	T55926	10	TEE RED. 6 X 4 CED-STD	311	487	43	101					
17	T55508	5	TEE RED. 12 X 10 CED-STD	321	470	35	101					
18	S42716	10	CODO 2 1/2 X 90° R.C. CED-XS	297	468	35	100					

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°: 473980 466326 473980 11033051 11044304 11061786 306020 "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	
HF	S32203	32203	0.330	0.180	0.780	0.010	0.001	0.300	0.050	0.040	0.010	0.016	0.001	0.001
HF	S31159	31159	0.340	0.200	0.780	0.014	0.001	0.280	0.040	0.040	0.010	0.014	0.001	0.000
HF	S32858	32858	0.320	0.180	0.740	0.012	0.001	0.280	0.040	0.060	0.010	0.030	0.001	0.001
HF	S42828	42828	0.330	0.190	0.760	0.012	0.001	0.330	0.030	0.038	0.020	0.020	0.003	0.002
HF	T55926	55926	0.310	0.170	0.680	0.012	0.001	0.290	0.060	0.067	0.021	0.030	0.000	0.000
HF	T55508	55508	0.320	0.190	0.690	0.012	0.002	0.290	0.050	0.058	0.017	0.030	0.000	0.000
HF	S42716	42716	0.303	0.170	0.720	0.009	0.001	0.300	0.030	0.032	0.020	0.016	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 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.
---	--	--	--

FOR03161