

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

Número:
Number: 22480
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Vendido a: Sold to: PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No: 6397 - 6398	Lista de Empaque: Packing List: 11438	Fecha/Date: 20 de Mayo de 2009
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	T42699	16	TEE 8 CED-STD	331	522	32	123					
2	S49119	4	CODO 4 X 45° CED-STD	325	495	34	111					
3	S21712	11	CODO 4 X 45° CED-STD	301	466	32	110					
4	S27377	2	CODO 4 X 45° CED-STD	328	500	32	128					
5	S31761	3	CODO 4 X 45° CED-STD	305	479	32	111					
6	T42086	4	CODO 8 X 45° CED-STD	270	434	36	129					
7	T42417	4	CODO 8 X 45° CED-STD	307	461	34	103					
8	T42773	2	CODO 8 X 45° CED-STD	365	494	34	106					
9	T41976	4	CODO 12 X 45° CED-STD	274	482	35	97					
10	T41645	4	CODO 12 X 45° CED-STD	287	453	35	96					
11	T42340	2	CODO 12 X 45° CED-STD	321	492	42	118					

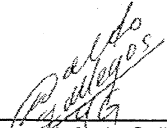
ANALISIS QUIMICO / CHEMICAL ANALYSIS														
PROCESO PROCESS	COLADA HEAT CODE	COLADA/HEAT M.P./MOTHER PIPE	%C.E.	%C	%Mn	%P	%S	%Si	%Cr	%Cu	%Mo	%Ni	%V	%Nb
HF	T42699	42699	0.350	0.190	0.840	0.018	0.001	0.320	0.040	0.062	0.023	0.020	0.000	0.000
HF	S49119	49119	0.350	0.200	0.750	0.012	0.001	0.290	0.070	0.039	0.010	0.025	0.001	0.001
HF	S21712	21712	0.330	0.190	0.710	0.012	0.001	0.270	0.050	0.045	0.010	0.023	0.001	0.002
HF	S27377	27377	0.350	0.200	0.790	0.015	0.000	0.270	0.040	0.035	0.020	0.025	0.001	0.001
HF	S31761	31761	0.320	0.180	0.740	0.008	0.001	0.250	0.040	0.042	0.010	0.023	0.001	0.000
HF	T42086	42086	0.300	0.170	0.670	0.009	0.001	0.280	0.050	0.064	0.011	0.030	0.000	0.000
HF	T42417	42417	0.290	0.160	0.670	0.012	0.001	0.280	0.040	0.046	0.018	0.030	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	T41976	41976	0.300	0.170	0.670	0.008	0.001	0.280	0.040	0.046	0.011	0.030	0.000	0.000
HF	T41645	41645	0.310	0.180	0.660	0.014	0.001	0.280	0.050	0.049	0.010	0.030	0.000	0.000
HF	T42340	42340	0.300	0.170	0.670	0.011	0.003	0.280	0.050	0.065	0.007	0.030	0.000	0.000

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°: 9002217 348224 373204 427997 462049 8065069 8066859 9002848 9005334 8059547 9002777

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

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.