

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

Número:
Number: 23260
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Vendido a: Sold to: PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No: 7773 - 7881 - 7873 - 7652 - 7685	Lista de Empaque: Packing List: 11879	Fecha/Date: 12 de Marzo 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	S31103	132	CODO 3 X 90° R.L. CED-STD	304	510	29	116	PLEASA ANAHUAC Y CIAS. S.A. DE C.V. CONTROL DE CALIDAD FECHA <u>16 Mar 2010</u> FIRMA <u>E. RUIZ</u>				
2	T46857	6	CODO 14 X 90° R.L. CED-STD	323	495	33	141					
3	T45662	29	TEE 4 CED-STD	335	502	40	126					
4	T45929	31	TEE 4 CED-STD	307	484	37	110					
5	S21394	100	CODO 2 X 90° R.L. CED-STD	321	478	29	133					
6	T46857	4	CODO 14 X 45° CED-STD	323	495	33	141					
7	T42699	2	CODO 14 X 45° CED-STD	313	481	43	126					
8	T47231	3	CODO 8 X 45° CED-STD	304	478	38	120					
9	T43299	17	CODO 8 X 45° CED-STD	326	480	34	109					
10	T47708	6	CODO 10 X 45° CED-STD	317	485	40	120					
11	T42773	7	CODO 8 X 90° R.L. CED-STD	365	494	34	106					

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	S31103	31103	0.320	0.180	0.750	0.009	0.001	0.290	0.050	0.056	0.010	0.040	0.001	0.001
HF	T46857	46857	0.310	0.180	0.660	0.012	0.004	0.300	0.050	0.080	0.029	0.040	0.000	0.000
HF	T45662	45662	0.310	0.180	0.670	0.015	0.003	0.280	0.040	0.057	0.023	0.030	0.000	0.000
HF	T45929	45929	0.310	0.180	0.670	0.016	0.002	0.290	0.040	0.068	0.015	0.030	0.000	0.000
HF	S21394	21394	0.310	0.180	0.720	0.011	0.001	0.260	0.030	0.036	0.010	0.021	0.001	0.001
HF	T46857	46857	0.310	0.180	0.660	0.012	0.004	0.300	0.050	0.080	0.029	0.040	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	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	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	T47708	47708	0.300	0.170	0.670	0.012	0.002	0.300	0.040	0.078	0.014	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

Certificamos que los resultados de los Analisis 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°: 460632 9063903 9060621 9057683 373275 9063903 9002217 9063911 9052913 10003397 9002033

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°: 460632 9063903 9060621 9057683 373275 9063903 9002217 9063911 9052913 10003397 9002033

"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.