

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

Número:  
Number:

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24083

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Vendido a: Sold to:	PROVEEDORA DE MATERIALES ANKER, S.A. DE C.V.	Pedido del Cliente No: Customers Order No:	5855 - 5823 - 5870	Lista de Empaque: Packing List:	12358	Fecha/Date:	27 de Noviembre 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	TS0879	20	CODO 8 X 45° CED-XS	285	473	44	91					
2	TS1345	55	TEE 4 CED-STD	349	499	30	104					
3	TS1817	100	CODO 6 X 45° CED-STD	323	499	42	124					
4	TS0206	100	CODO 3 X 45° CED-STD	354	506	37	118					
5	TS0825	150	RED. CONC. 8 X 6 CED-STD	314	487	42	120					
6	S32307	409	CODO 2 1/2 X 90° R.L. CED-STD	314	486	31	122					
7	TS0825	31	CODO 10 X 45° CED-STD	298	479	42	124					
8	TS0825	18	CODO 10 X 90° R.L. CED-STD	298	479	42	124					
9	S31050	44	CODO 1 1/2 X 90° R.L. CED-STD.	367	534	32	130					
10	S27377	10	CODO 5 X 90° R.C. CED-STD	319	494	32	102					
11	S31158	30	RED. CONC. 3 X 2 1/2 CED-STD	311	479	33	100					

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	TS0879	50879	0.310	0.180	0.670	0.015	0.001	0.290	0.040	0.049	0.015	0.030	0.000	0.000
HF	TS1345	51345	0.310	0.170	0.720	0.012	0.002	0.290	0.060	0.063	0.017	0.030	0.000	0.000
HF	TS1817	51817	0.330	0.190	0.710	0.011	0.002	0.300	0.050	0.054	0.027	0.030	0.000	0.000
HF	TS0206	50206	0.320	0.180	0.690	0.014	0.002	0.280	0.060	0.073	0.025	0.040	0.000	0.000
CF	TS0825	50825	0.310	0.180	0.660	0.011	0.001	0.270	0.050	0.049	0.012	0.020	0.000	0.000
HF	S32307	32307	0.330	0.190	0.710	0.012	0.002	0.260	0.050	0.039	0.010	0.028	0.001	0.001
HF	TS0825	50825	0.310	0.180	0.660	0.012	0.001	0.280	0.050	0.050	0.012	0.020	0.000	0.000
HF	TS0825	50825	0.310	0.180	0.660	0.012	0.001	0.280	0.050	0.050	0.012	0.020	0.000	0.000
HF	S31050	31050	0.330	0.190	0.760	0.007	0.002	0.270	0.030	0.023	0.010	0.013	0.001	0.000
HF	S27377	27377	0.330	0.180	0.790	0.017	0.001	0.270	0.040	0.035	0.020	0.033	0.001	0.001
CF	S31158	31158	0.310	0.180	0.730	0.012	0.001	0.270	0.030	0.036	0.010	0.013	0.001	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°: 10037214 10049766 10049767 10039275 10040918 468319 10051515 10051515 457348 427998 9002235

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°: 10037214 10049766 10049767 10039275 10040918 468319 10051515 10051515 457348 427998 9002235

"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".

<p>Notas:</p> <p>Formado en caliente a 620°C-980°C, enfriado al aire; Formado en frío normalizado a 940°C max.</p> <p>Tiempo de permanencia 10'.</p> <p>Inspección Dimensional: Satisfactoria.</p> <p>HF: FORMADO EN CALIENTE/HOT FORMED</p>	<p>Notes:</p> <p>Hot formed fittings in a range from 620°C to 980°C, cooled in still air.</p> <p>Cold formed normalized at 940°C max.</p> <p>Holding time 10'.</p> <p>Visual dimensional check: Satisfactory</p> <p>CF: FORMADO EN FRIO/COLD FORMED</p>	<p><i>Waldo Gallegos</i></p> <p>Quality Manager/Jefe de Calidad: ING. WALDO GALLEGOS GALVAN</p>	<p>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.</p> <p>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.</p>
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