

**CERTIFICADO DE CALIDAD
INSPECTION CERTIFICATE**
(DIN EN 10204:2004E - ISO 10474: 2013 3.1.B)

Numero:
Number:

32138

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Vendido a: Sold to:	PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No:	26804 - 27241	Lista de Empaque: Packing List:	17867	Fecha/Date:	29 de noviembre de 2018
Especificaciones y Grados / Standard or Specification and Steel Grade	Seamless Fittings according to ASTM A 234 WPB-18e Conform to ASME II Ed. 2017, ASME SA-234 Grade WPB	Dimensiones y tolerancias / Dimension and tolerances	ASME B 16.9 - 2018	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	T95811	228	CODO 4 X 90° R.L. CED-STD	435	504	30	155					
2	T95410	1	CODO 14 X 90° R.L. CED-STD	276	445	36	124					
3	T93020	5	CODO 14 X 90° R.L. CED-STD	304	463	35	138					
4	T92982	40	TEE 4 CED-XS	256	438	40	142					
5	T88176	160	CODO 3 X 90° R.L. CED-XS	329	486	37	131					
6	T95410	15	RED. CONC. 10 X 8 CED-STD	314	484	40	143					
7	T94028	72	CODO 8 X 90° R.L. CED-XS	314	455	30	133					
8	T95587	36	CODO 10 X 45° CED-STD	278	435	32	134					
9	T93683	95	CODO 4 X 90° R.L. CED-XS	410	472	30	146					
10	T94155	105	CODO 4 X 90° R.L. CED-XS	432	517	36	143					
11	T89832	8	CODO 14 X 90° R.L. CED-XS	273	456	35	134					

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	T95811	95811	0.300	0.160	0.670	0.007	0.001	0.280	0.060	0.064	0.027	0.030	0.003	0.000
HF	T95410	95410	0.310	0.170	0.700	0.009	0.002	0.280	0.040	0.076	0.033	0.040	0.002	0.000
HF	T93020	93020	0.350	0.190	0.820	0.008	0.002	0.280	0.060	0.083	0.019	0.040	0.003	0.000
HF	T92982	92982	0.320	0.180	0.740	0.007	0.001	0.270	0.040	0.075	0.018	0.040	0.002	0.000
HF	T88176	88176	0.320	0.180	0.710	0.010	0.001	0.270	0.060	0.072	0.024	0.040	0.000	0.000
CF	T95410	95410	0.310	0.170	0.700	0.009	0.001	0.280	0.040	0.076	0.033	0.040	0.002	0.000
HF	T94028	94028	0.310	0.170	0.690	0.012	0.001	0.280	0.070	0.054	0.020	0.030	0.004	0.000
HF	T95587	95587	0.310	0.170	0.690	0.008	0.003	0.260	0.050	0.074	0.024	0.030	0.001	0.000
HF	T93683	93683	0.310	0.180	0.680	0.006	0.001	0.270	0.040	0.057	0.018	0.030	0.002	0.000
HF	T94155	94155	0.320	0.180	0.700	0.007	0.002	0.270	0.040	0.077	0.020	0.030	0.002	0.000
HF	T89832	89832	0.300	0.170	0.680	0.006	0.001	0.280	0.050	0.075	0.012	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°: 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°: 18059557 18051312 18056304 18036031 17046609 18052582 18039424 18062488 18045899 18045899 17073169

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, 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>	 Quality Manager/Jefe de Calidad: ING. ALFONSO ORTEGA GARCIA	<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> <p>MATERIAL ACCORDING TO NACE MR0175/ISO 15156, 2015 AND NACE MR0103,2015 ONLY HARDNESS</p>
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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	T89010	20	CODO 4 X 90° R.C. CED-XS	283	438	36	142					
13	S74455	42	CODO 1 1/2 X 90° R.C. CED-STD	372	535	47	116					
14	T78169	2	RED. CONC. 12 X 8 CED-40	265	420	36	140					

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	T89010	89010	0.320	0.180	0.760	0.013	0.001	0.290	0.040	0.064	0.020	0.030	0.000	0.000
HF	S74455	74455	0.320	0.180	0.750	0.017	0.001	0.280	0.050	0.050	0.020	0.024	0.001	0.001
CF	T78169	78169	0.310	0.180	0.660	0.007	0.002	0.280	0.040	0.063	0.013	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°: 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°: 17058860 16011034 15029457

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/COLO FORMED



Quality Manager/Jefe de Calidad:
ING. ALFONSO ORTEGA GARCIA

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.
MATERIAL ACCORDING TO NACE MR0175/ISO 15156, 2015 AND NACE MR0103,2015 ONLY HARDNESS

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