

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

Numero:
Number:

32551

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Vendido a: Sold to:	PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No:	28216 - 26804 - 27931	Lista de Empaque: Packing List:	18180	Fecha/Date:	3 de junio de 2019
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	T96572	57	CODO 3 X 90° R.L. CED-STD	345	491	39	140					
2	T96380	15	RED. CONC. 10 X 8 CED-STD	330	479	42	126					
3	T98479	80	CODO 4 X 45° CED-STD	266	449	36	148					
4	T96380	7	CODO 12 X 45° CED-STD	275	415	38	134					
5	T96379	3	CODO 12 X 45° CED-STD	269	449	35	140					
6	T99151	3	CODO 12 X 45° CED-STD	269	512	30	141					
7	T99150	5	CODO 12 X 45° CED-STD	276	425	33	138					
8	T96509	3	RED. CONC. 12 X 10 CED-80	311	487	48	134					
9	T98658	10	RED. CONC. 10 X 8 CED-XS	330	500	41	136					
10	T98479	40	CODO 5 X 90° R.C. CED-STD	336	485	40	120					
11	T7533	1	CODO 6 X 90° R.C. CED-XS	299	481	30	146					

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	T96572	96572	0.300	0.170	0.660	0.010	0.002	0.270	0.060	0.055	0.028	0.030	0.002	0.000
CF	T96380	96380	0.290	0.160	0.670	0.011	0.002	0.270	0.050	0.067	0.025	0.030	0.002	0.000
HF	T98479	98479	0.310	0.180	0.660	0.007	0.002	0.260	0.040	0.080	0.020	0.040	0.001	0.000
HF	T96380	96380	0.300	0.170	0.670	0.012	0.003	0.270	0.050	0.070	0.030	0.030	0.002	0.000
HF	T96379	96379	0.310	0.170	0.700	0.017	0.003	0.260	0.070	0.060	0.030	0.030	0.003	0.000
HF	T99151	99151	0.310	0.170	0.670	0.007	0.003	0.270	0.040	0.060	0.030	0.030	0.002	0.000
HF	T99150	99150	0.300	0.170	0.670	0.007	0.003	0.280	0.040	0.060	0.030	0.040	0.002	0.000
CF	T96509	96509	0.320	0.180	0.740	0.012	0.003	0.280	0.050	0.060	0.020	0.030	0.002	0.000
CF	T98658	98658	0.330	0.180	0.750	0.008	0.003	0.280	0.050	0.080	0.020	0.040	0.002	0.000
HF	T98479	98479	0.310	0.180	0.660	0.007	0.002	0.260	0.040	0.070	0.020	0.040	0.001	0.000
HF	T7533	7533	0.300	0.170	0.720	0.006	0.001	0.270	0.020	0.036	0.008	0.020	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°:
19002625 18062663 19012951 19011944 19011944 19017211 19017211 19010958 19011941 19012860 14021704
"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. 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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**CERTIFICADO DE CALIDAD
INSPECTION CERTIFICATE**

(DIN EN 10204:2004E - ISO 10474: 2013 3.1.B)

Numero:
Number:

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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 - 28216 - 27931 - 27241	Lista de Empaque: Packing List: 18180	Fecha/Date: 3 de junio de 2019
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
12	T96575	19	CODO 6 X 90° R.C. CED-XS	312	485	37	130					
13	T96668	8	CODO 14 X 45° CED-40	303	477	39	122					
14	T98480	50	CODO 3 X 45° CED-XS	331	474	37	151					
15	T95484	14	RED. CONC. 12 X 8 CED-STD	274	415	37	127					
16	T98371	6	TEE 12 CED-80	240	440	43	134					
17	S44660	40	CODO 2 X 90° R.C. CED-STD	334	496	29	137					
18	T98658	5	RED. CONC. 10 X 4 CED-80	308	498	41	128					
19	T95484	5	RED. CONC. 12 X 10 CED-40	274	415	37	127					
20	S44817	12	CODO 2 X 90° R.C. CED-XS	321	491	30	89					
21	T86658	15	CODO 6 X 180° R.C. CED-XS	295	460	36	145					
22	S42140	5	CODO 6 X 180° R.C. CED-XS	318	479	35	104					

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	T96575	96575	0.310	0.170	0.670	0.011	0.002	0.270	0.060	0.060	0.030	0.030	0.002	0.000
HF	T96668	96668	0.300	0.170	0.680	0.011	0.002	0.280	0.050	0.070	0.020	0.030	0.002	0.000
HF	T98480	98480	0.300	0.170	0.660	0.009	0.001	0.260	0.050	0.070	0.020	0.030	0.002	0.000
CF	T95484	95484	0.300	0.170	0.670	0.007	0.002	0.290	0.040	0.060	0.030	0.030	0.001	0.000
HF	T98371	98371	0.320	0.180	0.670	0.010	0.002	0.300	0.060	0.070	0.020	0.040	0.002	0.000
HF	S44660	44660	0.310	0.170	0.720	0.008	0.000	0.260	0.050	0.070	0.020	0.031	0.002	0.002
CF	T98658	98658	0.330	0.180	0.750	0.008	0.000	0.280	0.050	0.080	0.020	0.040	0.002	0.000
CF	T95484	95484	0.300	0.170	0.670	0.007	0.002	0.290	0.040	0.060	0.030	0.030	0.001	0.000
HF	S44817	44817	0.310	0.180	0.730	0.008	0.001	0.290	0.040	0.030	0.020	0.014	0.002	0.002
HF	T86658	86658	0.320	0.180	0.690	0.009	0.001	0.270	0.040	0.065	0.030	0.030	0.000	0.000
HF	S42140	42140	0.330	0.200	0.740	0.010	0.001	0.290	0.030	0.017	0.010	0.011	0.002	0.002

Certificamos que los resultados de los Analisis Quimicos y Pruebas Mecanicas son verdaderos o una copia fiel de los certificados enviados por el Fabricante y/o el proveedor de Materia Prima (Tuberia 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°: 19013877 19011404 19011962 19009284 19023400 17058106 19013575 19009284 17058326 17046838 11030664

"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 frio normalizado a 940°C max. Tiempo de permanencia 10'. Inspección Dimensional: Satisfactoria. HF: FORMADO EN CALIENTE/HOT FORMED	Notas: 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	<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. 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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**CERTIFICADO DE CALIDAD
 INSPECTION CERTIFICATE**

(DIN EN 10204:2004E - ISO 10474: 2013 3.1.B)

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Vendido a: Sold to: PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No: 27931 -	Lista de Empaque: Packing List: 18180	Fecha/Date: 3 de junio de 2019
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
23	T98371	2	TEE RED. 12 X 6 CED-80	240	440	43	134					
24	T72649	2	TEE RED. 12 X 6 CED-80	260	451	41	135					

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	T98371	98371	0.320	0.180	0.670	0.010	0.002	0.300	0.060	0.070	0.020	0.040	0.002	0.000
HF	T72649	72649	0.310	0.170	0.660	0.006	0.001	0.280	0.070	0.069	0.016	0.050	0.000	0.000

Certificamos que los resultados de los Analisis Quimicos y Pruebas Mecanicas 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°: 19023400 15015242

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°: 19023400 15015242

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. Tiempo de permanencia 10'. Inspección Dimensional: Satisfactoria. 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. Holding time 10'. Visual dimensional check: Satisfactory. CF: FORMADO EN FRIO/COLD FORMED</p>	<p>Quality Manager/Jefe de Calidad: ING. ALFONSO ORTEGA GARCIA</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. 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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