

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

Numero: Number:	Pagina/Page:
28945	1
Lista de Empaque: Packing List:	Fecha/Date:
15076	12 de septiembre de 2014

Vendido a: Sold to:	PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No:	19265 - 18670
Especificaciones y Grados / Standard or Specification and Steel Grade	Seamless Fittings according to ASTM A 234 WPB-13e	Dimensiones y tolerancias / Dimension and tolerances	ASME B 16.9 - 2007
Conform to ASME II Ed. 2001 ASME SA-234, Grade WPB		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				
ÁRT. 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	T7195	2	CODO 6 X 45° CED-XS	316	476	36	148					
2	T7538	58	CODO 6 X 45° CED-XS	248	468	37	156					
3	T72798	4	TEE 8 CED-XS	363	501	33	143					
4	T69401	16	TEE 8 CED-XS	278	471	40	152					
5	T8107	40	TEE 4 CED-XS	313	475	42	151					
6	T68667	3	TEE 6 CED-XS	246	455	38	154					
7	T69560	1	TEE 6 CED-XS	306	486	44	148					
8	T61866	1	TEE 6 CED-XS	311	482	42	147					
9	T71197	13	TEE 6 CED-XS	330	512	39	149					
10	T7538	40	CODO 6 X 90° R.L. CED-XS	248	468	37	156					
11	T72420	18	CODO 12 X 45° CED-STD	257	434	34	142					

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	T7195	7195	0.300	0.170	0.710	0.005	0.002	0.270	0.040	0.030	0.006	0.020	0.000	0.000
HF	T7538	7538	0.310	0.180	0.700	0.005	0.001	0.270	0.030	0.043	0.008	0.020	0.000	0.000
HF	T72798	72798	0.340	0.180	0.790	0.007	0.001	0.280	0.060	0.078	0.043	0.040	0.000	0.000
HF	T69401	69401	0.320	0.170	0.740	0.009	0.001	0.260	0.060	0.066	0.025	0.040	0.000	0.000
HF	T8107	8107	0.310	0.180	0.720	0.006	0.001	0.270	0.020	0.051	0.008	0.030	0.000	0.000
HF	T68667	68667	0.310	0.180	0.680	0.008	0.002	0.260	0.040	0.062	0.013	0.030	0.000	0.000
HF	T69560	69560	0.310	0.180	0.690	0.007	0.001	0.270	0.040	0.058	0.016	0.040	0.000	0.000
HF	T61866	61866	0.310	0.170	0.730	0.015	0.001	0.270	0.030	0.049	0.015	0.030	0.000	0.000
HF	T71197	71197	0.350	0.190	0.800	0.007	0.002	0.290	0.060	0.073	0.023	0.040	0.000	0.000
HF	T7538	7538	0.310	0.180	0.700	0.005	0.001	0.270	0.030	0.043	0.008	0.020	0.000	0.000
HF	T72420	72420	0.320	0.180	0.660	0.007	0.001	0.270	0.070	0.074	0.020	0.050	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°:

14009632 14015987 14042795 14002652 14040190 14000656
14007243 12065698 14022381 14015987 14040333

"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.

MATERIAL ACCORDING TO NACE MR0175 / ISO 15156-1, 2009 AND NACE MR0103, 2012 ONLY HARDNESS

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

Numero:
Number:

28946

Pagina/Page:

2

Vendido a: Sold to:	PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No:	19265 - 18670	Lista de Empaque: Packing List:	15076	Fecha/Date:	12 de septiembre de 2014
Especificaciones y Grados / Standard or Specification and Steel Grade		Dimensiones y tolerancias / Dimension and tolerances			Factura/Invoice:		
Seamless Fittings according to ASTM A 234 WPB-13e		ASME B 16.9 - 2007			Bocas / Ends		
Conform to ASME II Ed. 2001 ASME SA-234, Grade WPB					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	T70959	40	CODO 10 X 90° R.L. CED-STD	283	457	33	149					
13	T65064	13	CODO 12 X 90° R.L. CED-40	288	472	69	136					
14	T71197	20	TEE RED. 6 X 4 CED-XS	330	512	39	149					
15	T69560	2	CODO 10 X 90° R.L. CED-80	379	500	34	146					
16	S44801	32	CODO 1 1/2 X 45° CED-STD	381	516	48	116					
17	S28476	5	CODO 1 1/2 X 45° CED-STD	388	512	48	128					
18	T6079	30	CODO 4 X 45° CED-XS	293	436	33	149					
19	T5588	4	CODO 4 X 45° CED-XS	310	506	33	154					
20	T7191	6	CODO 4 X 45° CED-XS	270	463	35	144					
21	T65856	5	TEE 12 CED-80	262	457	43	142					
22	T6971	25	CODO 5 X 45° CED-XS	288	479	42	120					

ANALISIS QUIMICO / CHEMICAL ANALYSIS														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°: 14025264 13032132 14022381 14004270 13032098 13053803 13031256 13013895 14022645 14036882 14044789 "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".
PROCESO PROCESS	COLADA HEAT CODE	COLADA/HEAT M.P./MOTHER PIPE	%C.E.	%C	%Mn	%P	%S	%Si	%Cr	%Cu	%Mo	%Ni	%V	
HF	T70959	70959	0.320	0.170	0.760	0.007	0.001	0.270	0.040	0.075	0.017	0.040	0.000	0.000
HF	T65064	65064	0.310	0.180	0.660	0.013	0.002	0.300	0.060	0.068	0.023	0.040	0.000	0.000
HF	T71197	71197	0.350	0.190	0.800	0.007	0.002	0.290	0.060	0.073	0.023	0.040	0.000	0.000
HF	T69560	69560	0.300	0.170	0.680	0.007	0.001	0.270	0.050	0.059	0.016	0.040	0.000	0.000
HF	S44801	44801	0.310	0.160	0.830	0.012	0.001	0.280	0.040	0.050	0.010	0.035	0.001	0.002
HF	S28476	28476	0.330	0.180	0.760	0.014	0.002	0.270	0.050	0.050	0.030	0.082	0.001	0.001
HF	T6079	6079	0.320	0.190	0.720	0.005	0.002	0.280	0.020	0.039	0.007	0.020	0.000	0.000
HF	T5588	5588	0.330	0.180	0.820	0.005	0.001	0.310	0.020	0.029	0.008	0.020	0.000	0.000
HF	T7191	7191	0.300	0.170	0.710	0.006	0.001	0.270	0.030	0.033	0.013	0.020	0.000	0.000
HF	T65856	65856	0.330	0.170	0.850	0.006	0.001	0.270	0.040	0.075	0.032	0.040	0.000	0.000
HF	T6971	6971	0.310	0.180	0.700	0.005	0.002	0.300	0.020	0.041	0.010	0.020	0.000	0.000

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. MATERIAL ACCORDING TO NACE MR0175 / ISO 15156-1, 2009 AND NACE MR0103, 2012 ONLY HARDNESS	FOR03161
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CERTIFICADO DE CALIDAD INSPECTION CERTIFICATE (DIN EN 10204:2004E - ISO 10474 3.1.B)		Numero: Number: 28947	Pagina/Page: 3
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Vendido a: Sold to: PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No: 19265 - 18670 -	Lista de Empaque: Packing List: 15076	Fecha/Date: 12 de septiembre de 2014
Especificaciones y Grados / Standard or Specification and Steel Grade Seamless Fittings according to ASTM A 234 WPB-13e Conform to ASME II Ed. 2001 ASME SA-234,Grade WPB	Dimensiones y tolerancias / Dimension and tolerances ASME B 16.9 - 2007		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	T7537	1	CODO 5 X 45° CED-XS	303	472	39	150					
24	S44801	42	CODO 1 1/2 X 90° R.C. CED-STD	381	516	48	116					
25	T21227	1	CODO 1 X 45° CED-STD	289	417	51	122					
26	R71005	1	CODO 1 X 45° CED-STD	329	463	46	184					
27	T23030	9	CODO 1 X 45° CED-STD	310	449	49	151					
28	T24013	50	CODO 1 X 45° CED-XS	314	435	49	118					
29	T62907	2	TEE RED. 12 X 6 CED-STD	312	489	30	122					
30	T64681	8	TEE RED. 12 X 6 CED-STD	326	484	33	153					

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	T7537	7537	0.300	0.170	0.720	0.007	0.002	0.270	0.030	0.042	0.008	0.020	0.000	0.000
HF	S44801	44801	0.310	0.160	0.830	0.012	0.001	0.280	0.040	0.050	0.010	0.035	0.001	0.002
HF	T21227	21227	0.282	0.158	0.600	0.009	0.001	0.185	0.060	0.021	0.044	0.022	0.000	0.000
HF	R71005		0.310	0.170	0.720	0.001	0.002	0.210	0.050	0.018	0.018	0.080	0.000	0.000
HF	T23030	23030	0.310	0.150	0.550	0.009	0.000	0.180	0.080	0.080	0.043	0.040	0.000	0.000
HF	T24013	24013	0.300	0.140	0.520	0.006	0.000	0.170	0.080	0.050	0.032	0.040	0.000	0.000
HF	T62907	62907	0.310	0.170	0.700	0.008	0.001	0.280	0.060	0.077	0.028	0.040	0.000	0.000
HF	T64681	64681	0.310	0.180	0.670	0.014	0.000	0.260	0.040	0.053	0.017	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°:
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°:
14011757 13032098 T-6612/1 2270324 12792 12791
12086372 13023756
"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'.</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. Holding time 10'.</p> <p>Visual dimensional check: Satisfactory</p> <p>CF: FORMADO EN FRIO/COLD FORMED</p>	<p style="text-align: center;"> 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. 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 15156-1, 2009 AND NACE MR0103, 2012 ONLY HARDNESS</p>
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