

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

Numero:
Number: 31004
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Vendido a: Sold to: PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No: 25370	Lista de Empaque: Packing List: 17152	Fecha/Date: 30 de junio de 2017
Especificaciones y Grados / Standard or Specification and Steel Grade Seamless Fittings according to ASTM A 234 WPB-13e Conform to ASME II Ed. 2013 ASME SA-234,Grade WPB	Dimensiones y tolerancias / Dimension and tolerances ASME B 16.9 - 2012		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	T87036	200	CODO 6 X 90° R.L. CED-STD.	316	495	39	118					
2	T79785	1	TEE 8 CED-STD	302	487	44	124					
3	T79783	3	TEE 8 CED-STD	319	487	43	122					
4	T84134	28	TEE 8 CED-STD	302	484	46	122					
5	T79129	7	TEE 4 CED-STD	313	481	41	147					
6	T80981	23	TEE 4 CED-STD	335	515	39	124					
7	T80870	23	TEE 4 CED-STD	309	488	44	118					
8	T83820	22	TEE 4 CED-STD	304	481	38	118					
9	T80753	35	TEE 4 CED-STD	322	487	41	124					
10	T79783	1	CODO 14 X 45° CED-STD	315	495	46	122					
11	T80490	11	CODO 14 X 45° CED-STD	280	481	46	122					


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	T87036	87036	0.310	0.180	0.680	0.010	0.001	0.280	0.040	0.053	0.014	0.020	0.000	0.000
HF	T79785	79785	0.320	0.170	0.770	0.007	0.001	0.250	0.050	0.051	0.024	0.030	0.000	0.000
HF	T79783	79783	0.310	0.180	0.660	0.006	0.002	0.260	0.060	0.067	0.029	0.030	0.000	0.000
HF	T84134	84134	0.300	0.170	0.690	0.009	0.002	0.270	0.030	0.058	0.018	0.030	0.000	0.000
HF	T79129	79129	0.300	0.170	0.680	0.006	0.000	0.270	0.040	0.058	0.030	0.030	0.000	0.000
HF	T80981	80981	0.340	0.180	0.830	0.008	0.002	0.300	0.060	0.056	0.022	0.040	0.000	0.000
HF	T80870	80870	0.320	0.180	0.700	0.007	0.003	0.280	0.050	0.059	0.022	0.030	0.000	0.000
HF	T83820	83820	0.310	0.180	0.680	0.011	0.001	0.270	0.040	0.077	0.022	0.030	0.000	0.000
HF	T80753	80753	0.310	0.170	0.700	0.007	0.001	0.280	0.040	0.078	0.019	0.040	0.000	0.000
HF	T79783	79783	0.300	0.170	0.670	0.007	0.002	0.270	0.050	0.067	0.025	0.030	0.000	0.000
HF	T80490	80490	0.310	0.170	0.740	0.008	0.001	0.280	0.040	0.062	0.018	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°: 17027758 16001547 16004411 16033557 15036321 16019902 16019902 17010372 16019902 16011480 16008029

"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 MR0103,2012 ONLY HARDNESS

**CERTIFICADO DE CALIDAD
INSPECTION CERTIFICATE**
(DIN EN 10204:2004E - ISO 10474 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:	25370	Lista de Empaque: Packing List:	17152	Fecha/Date:	30 de junio de 2017
Especificaciones y Grados / Standard or Specification and Steel Grade Seamless Fittings according to ASTM A 234 WPB-13e Conform to ASME II Ed. 2013 ASME SA-234, Grade WPB	Dimensiones y tolerancias / Dimension and tolerances ASME B 16.9 - 2012			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	T86483	36	CODO 16 X 90° R.L. CED-STD	339	489	39	122					
13	T8432	30	CODO 3 X 90° R.C. CED-XS	312	480	39	146					
14	T6968	2	CODO 3 X 90° R.C. CED-XS	320	439	32	148					
15	T8434	3	CODO 3 X 90° R.C. CED-XS	271	440	35	151					
16	T81604	36	CODO 12 X 90° R.L. CED-40	349	521	39	130					
17	D60010	7	RED. CONC. 16 X 12 CED-STD	320	539	34	143					
18	T77075	3	RED. CONC. 16 X 12 CED-STD	318	480	31	136					
19	S41922	8	CODO 1 1/2 X 45° CED-STD	339	503	45	157					
20	S74455	86	CODO 1 1/2 X 45° CED-STD	372	535	47	116					
21	R53385	50	CODO 1 1/2 X 45° CED-STD	345	518	50	151					
22	T86483	20	RED. CONC. 12 X 8 CED-STD	321	489	40	122					

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	T86483	86483	0.310	0.180	0.690	0.009	0.002	0.270	0.030	0.061	0.014	0.030	0.000	0.000
HF	T8432	8432	0.310	0.180	0.700	0.006	0.002	0.290	0.030	0.024	0.008	0.010	0.000	0.000
HF	T6968	6968	0.310	0.180	0.710	0.005	0.001	0.290	0.020	0.066	0.008	0.030	0.000	0.000
HF	T8434	8434	0.310	0.180	0.690	0.006	0.001	0.290	0.040	0.033	0.010	0.020	0.000	0.000
HF	T81604	81604	0.340	0.190	0.790	0.010	0.002	0.030	0.060	0.049	0.021	0.030	0.000	0.000
CF	D60010	60010	0.390	0.180	0.910	0.011	0.001	0.230	0.150	0.160	0.060	0.130	0.001	0.002
CF	T77075	77075	0.300	0.170	0.670	0.006	0.001	0.280	0.050	0.074	0.027	0.040	0.000	0.000
HF	S41922	41922	0.320	0.190	0.750	0.009	0.001	0.310	0.020	0.010	0.010	0.014	0.003	0.001
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
HF	R53385	53385	0.370	0.180	0.890	0.011	0.005	0.260	0.110	0.110	0.050	0.140	0.003	0.001
CF	T86483	86483	0.310	0.180	0.690	0.009	0.002	0.280	0.030	0.061	0.014	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°:
17016662 14040217 14028269 14043094 17006160 17005640 15019045 17024873 16011034 17011590 17016661
"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 MR0103,2012 ONLY HARDNESS
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CERTIFICADO DE CALIDAD INSPECTION CERTIFICATE (DIN EN 10204:2004E - ISO 10474 3.1.B)	Numero: Number:	Pagina/Page:
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Vendido a: Sold to:	PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No:	25370 -	Lista de Empaque: Packing List:	17152	Fecha/Date:	30 de junio de 2017
Especificaciones y Grados / Standard or Specification and Steel Grade Seamless Fittings according to ASTM A 234 WPB-13e Conform to ASME II Ed. 2013 ASME SA-234, Grade WPB	Dimensiones y tolerancias / Dimension and tolerances ASME B 16.9 - 2012			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	S42641	40	CODO 2 X 90° R.C. CED-STD	312	477	32	136					
24	T72870	4	RED. CONC. 12 X 8 CED-80	276	460	31	139					

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	S42641	42641	0.320	0.170	0.750	0.012	0.001	0.290	0.080	0.070	0.020	0.039	0.002	0.001
CF	T72870	72870	0.310	0.180	0.670	0.006	0.002	0.280	0.040	0.062	0.016	0.040	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°: 17031033 14041844

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°: 17031033 14041844

"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, enriado 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 MR0103,2012 ONLY HARDNESS

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