



EA-110504  
110508

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**CERTIFICADO DE CALIDAD  
INSPECTION CERTIFICATE**  
( DIN EN 10204:2004E - ISO 10474: 2013 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:	26804	Lista de Empaque: Packing List:	17709	Fecha/Date:	16 de agosto de 2018
Especificaciones y Grados / Standard or Specification and Steel Grade	Seamless Fittings according to ASTM A 234 WPB-18e			Dimensiones y tolerancias / Dimension and tolerances		Factura/Invoice: Bocas / Ends Biselado / Bevelled ends	
Conform to ASME II Ed. 2018 ASME SA-234, Grade WPB		ASME B 16.9 - 2012					

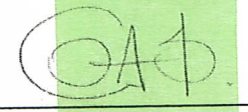
DESCRIPCION DE MATERIAL / MATERIAL DESCRIPTION				PRUEBAS MECANICAS / MECHANICAL TEST				PRUEBA DE IMPACTO 0°C / IMPACT TEST 0°C				
ART. ITEM	COLADA HEAT CODE	CANTIDAD QUANTITY	DESCRIPCION / DESCRIPTION	ESF. CEDENCIA YIELD STRENGTH (Mpa)	ESF. RÜPTURA TENSILE STRENGTH (Mpa)	ELONG. %2"	DUREZA HARDNESS HBW	DIMENSIONES SAMPLE DIM mm	1 Joules	2 Joules	3 Joules	PROMEDIO AVERAGE Joules
1	T91329	264	CODO 3 X 90° R.L. CED-STD	361	521	36	150					
2	T92058	40	CODO 6 X 90° R.C. CED-STD	335	499	36	122					
3	T91490	6	CODO 14 X 90° R.L. CED-STD	295	480	30	133					
4	T91329	55	TEE 4 CED-STD	318	504	36	143					
5	S44817	50	CODO 2 X 45° CED-STD	341	501	30	126					
6	T93020	18	CODO 12 X 90° R.L. CED-STD	271	418	32	128					
7	T93810	18	CODO 12 X 90° R.L. CED-STD	288	474	34	132					
8	T93864	56	CODO 10 X 90° R.L. CED-STD	296	489	33	142					
9	T92167	24	CODO 10 X 90° R.L. CED-STD	342	495	32	138					
10	T94027	60	CODO 8 X 90° R.L. CED-STD	298	480	38	116					
11	T86658	30	CODO 4 X 90° R.C. CED-STD	339	505	36	147					

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	T91329	91329	0.340	0.190	0.780	0.011	0.002	0.280	0.040	0.067	0.020	0.030	0.002	0.000
HF	T92058	92058	0.330	0.180	0.750	0.011	0.002	0.270	0.060	0.075	0.029	0.040	0.002	0.000
HF	T91490	91490	0.330	0.190	0.710	0.011	0.003	0.290	0.040	0.071	0.019	0.040	0.000	0.000
HF	T91329	91329	0.340	0.190	0.810	0.011	0.001	0.300	0.030	0.066	0.020	0.030	0.000	0.000
HF	S44817	44817	0.330	0.190	0.740	0.007	0.001	0.310	0.050	0.020	0.020	0.015	0.002	0.001
HF	T93020	93020	0.350	0.180	0.840	0.008	0.002	0.280	0.070	0.080	0.019	0.030	0.003	0.000
HF	T93810	93810	0.310	0.180	0.660	0.007	0.002	0.260	0.050	0.080	0.022	0.050	0.002	0.000
HF	T93864	93864	0.310	0.180	0.670	0.007	0.001	0.280	0.040	0.077	0.018	0.040	0.002	0.000
HF	T92167	92167	0.320	0.180	0.710	0.011	0.001	0.290	0.050	0.077	0.020	0.040	0.002	0.000
HF	T94027	94027	0.300	0.170	0.680	0.006	0.001	0.270	0.050	0.065	0.020	0.030	0.002	0.000
HF	T86658	86658	0.310	0.170	0.700	0.010	0.002	0.260	0.050	0.066	0.029	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°:  
18038934 18020106 18015830 18014137 17064689 18033542 18033542 18034004 18034004 18039972 17029542  
"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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<b>CERTIFICADO DE CALIDAD INSPECTION CERTIFICATE</b> ( DIN EN 10204:2004E - ISO 10474: 2013 3.1.B )		Numero: Number: 31910	Pagina/Page: 2
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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 -	Lista de Empaque: Packing List: 17709	Fecha/Date: 16 de agosto 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. 2018 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. RÜPTURA TENSILE STRENGTH (Mpa)	ELONG. %2"	DUREZA HARDNESS HBW	DIMENSIONES SAMPLE DIM mm	1 Joules	2 Joules	3 Joules	PROMEDIO AVERAGE Joules
12	T93218	9	CODO 16 X 90° R.L. CED-STD	276	435	34	140					
13	T88854	35	CODO 3 X 90° R.C. CED-XS	336	487	36	145					
14	S43405	30	CODO 1 1/2 X 45° CED-XS	333	481	32	140					
15	T92167	50	TEE 6 CED-STD	323	460	35	129					
16	T77390	4	CODO 4 X 45° CED-XS	335	492	40	123					
17	T80753	5	CODO 4 X 45° CED-XS	338	492	40	147					
18	T83820	31	CODO 4 X 45° CED-XS	280	480	43	118					
19	T91329	50	CODO 5 X 90° R.L. CED-STD	277	502	30	145					
20	S74455	42	CODO 1 1/2 X 90° R.C. CED-STD	372	535	47	116					

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	T93218	93218	0.320	0.190	0.690	0.006	0.002	0.270	0.030	0.066	0.011	0.030	0.002	0.000
HF	T88854	88854	0.320	0.180	0.730	0.012	0.002	0.290	0.040	0.064	0.017	0.020	0.000	0.000
HF	S43405	43405	0.360	0.170	0.900	0.010	0.005	0.260	0.080	0.100	0.050	0.100	0.002	0.001
HF	T92167	92167	0.320	0.180	0.710	0.011	0.002	0.290	0.050	0.078	0.020	0.040	0.002	0.000
HF	T77390	77390	0.330	0.180	0.780	0.005	0.001	0.270	0.040	0.079	0.018	0.040	0.000	0.000
HF	T80753	80753	0.320	0.170	0.740	0.007	0.002	0.280	0.050	0.080	0.022	0.040	0.000	0.000
HF	T83820	83820	0.310	0.180	0.680	0.011	0.002	0.280	0.040	0.079	0.021	0.030	0.000	0.000
HF	T91329	91329	0.330	0.180	0.790	0.011	0.001	0.290	0.030	0.066	0.019	0.030	0.003	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

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°: 18025455 17050157 15004483 18024930 15043615 16011780 17022802 18019540 16011034

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Holding time 10'.  
Visual dimensional check: Satisfactory  
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Quality Manager/Jefe de Calidad:  
ING. ALFONSO ORTEGA GARCIA

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

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