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

Numero: 32715  
 Pagina/Page: 1

Vendido a: PLESA ANAHUAC Y CIA. S.A. DE C.V.  
 Sold to:

Pedido del Cliente No: 27931 - 27241 - 28216 - 26804  
 Customers Order No:

Lista de Empaque: 18287  
 Packing List:

Fecha/Date: 6 de agosto 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. %Z"	DUREZA HARDNESS HBW	DIMENSIONES SAMPLE DIM mm	1 Joules	2 Joules	3 Joules	PROMEDIO AVERAGE Joules
1	T98480	1	CODO 6 X 90° R.C. CED-STD	363	514	30	138					
2	T98481	2	CODO 6 X 90° R.C. CED-STD	266	455	36	154					
3	T92058	7	CODO 6 X 90° R.C. CED-STD	341	490	30	148					
4	T98372	5	TEE 12 CED-STD	251	415	36	130					
5	T92982	50	TEE 4 CED-XS	256	438	40	142					
6	T99270	61	CODO 4 X 90° R.L. CED-XS	332	473	39	143					
7	D91564	4	RED. CONC. 16 X 8 CED-STD	304	468	36	132					
8	D72220	2	RED. CONC. 16 X 8 CED-STD	241	434	38	124					
9	T95411	1	CODO 12 X 45° CED-40	269	419	38	133					
10	T81604	1	CODO 12 X 45° CED-40	312	494	33	142					
11	T98658	10	TEE RED. 8 X 6 CED-XS	285	475	35	146					

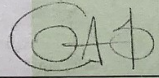
ANALISIS QUIMICO / CHEMICAL ANALYSIS														
PROCESO PROCESS	COLADA HEAT CODE	COLADA/HEAT M.P./MOTHER PIPE	%C.E.	%C	%Mn	%P	%S	%Si	%Cr	%Cu	%Mo	%Ni	%V	%Nb
HF	T98480	98480	0.300	0.170	0.660	0.008	0.001	0.250	0.050	0.070	0.020	0.030	0.003	0.000
HF	T98481	98481	0.310	0.180	0.660	0.006	0.002	0.250	0.050	0.070	0.020	0.030	0.003	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	T98372	98372	0.320	0.180	0.680	0.010	0.002	0.280	0.070	0.060	0.030	0.040	0.002	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	T99270	99270	0.310	0.180	0.670	0.006	0.001	0.280	0.050	0.070	0.030	0.030	0.002	0.000
CF	D91564	91564	0.350	0.170	0.810	0.011	0.003	0.190	0.120	0.090	0.030	0.070	0.002	0.000
CF	D72220	72220	0.350	0.180	0.780	0.012	0.002	0.200	0.110	0.110	0.030	0.080	0.002	0.000
HF	T95411	95411	0.320	0.170	0.750	0.010	0.002	0.280	0.040	0.068	0.033	0.040	0.002	0.000
HF	T81604	81604	0.340	0.190	0.790	0.010	0.002	0.300	0.060	0.049	0.021	0.030	0.000	0.000
HF	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

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°: 19022181 19014716 18020106 19016915 18036031 1902625 19036016 17061844 18052123 17006160 19013575

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.

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.

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

HF: FORMADO EN CALIENTE/HOT FORMED CF: FORMADO EN FRIO/COLD FORMED

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 obtained 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



**CERTIFICADO DE CALIDAD**  
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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	T98658	9	TEE 8 CED-XS	392	507	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	T98658	98658	0.330	0.180	0.740	0.008	0.003	0.270	0.050	0.080	0.020	0.040	0.002	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) certis conform to ASTM A106 Grade B N°: 19012856

"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

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