

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

Numero:  
Number:

27722

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Vendido a: Sold to:	PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No:	15528 - 15147 - 14833 -	Lista de Empaque: Packing List:	14389	Fecha/Date:	28 de Junio de 2013
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-10, NACE MR 01.75-2003		ASME B 16.9 - 2007			Bocas / Ends		
Conform to ASME II Ed. 2001 ASME SA-234, Grade WPB, NACE MR0103-2003					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	T5007	35	CODO 3 X 90° R.C. CED-XS	249	507	33	163					
13	T63314	15	RED. CONC. 10 X 6 CED-STD	293	479	41	122					
14	T6079	40	CODO 4 X 45° CED-XS	293	436	33	149					
15	S25806	40	CODO 2 X 90° R.C. CED-STD	365	522	30	139					
16	T65031	8	TEE RED. 8 X 3 STD	327	489	35	151					
17	T62942	2	TEE RED. 8 X 3 STD	327	487	36	133					
18	T62907	1	TEE RED. 12 X 6 CED-STD	312	489	30	122					
19	T64681	7	TEE RED. 12 X 6 CED-STD	326	484	33	153					
20	T65452	10	TEE 5 CED-XS	314	497	42	126					

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	T5007	5007	0.320	0.180	0.780	0.005	0.002	0.310	0.020	0.041	0.004	0.020	0.000	0.000
CF	T63314	63314	0.310	0.170	0.690	0.006	0.001	0.260	0.050	0.050	0.025	0.030	0.000	0.000
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	S25806	25806	0.330	0.180	0.730	0.014	0.001	0.280	0.050	0.070	0.040	0.034	0.002	0.002
HF	T65031	65031	0.310	0.180	0.670	0.016	0.001	0.270	0.060	0.044	0.018	0.030	0.000	0.000
HF	T62942	62942	0.300	0.170	0.680	0.010	0.001	0.290	0.040	0.050	0.024	0.030	0.000	0.000
HF	T62907	62907	0.310	0.170	0.700	0.008	0.001	0.280	0.050	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
HF	T65452	65452	0.320	0.180	0.730	0.015	0.000	0.290	0.070	0.041	0.017	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°  
12067628 13025951 13031256 13006492 13032131 12083842 12086372 13022021 13036980  
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-880°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  
CF: FORMADO EN FRIO/COLD FORMED

Notes:  
Hot formed fittings in a range from 620°C to 880°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. 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.

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

Numero:  
Number: 27721  
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Vendido a: Sold to: PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No: 15528	Lista de Empaque: Packing List: 14389	Fecha/Date: 28 de Junio de 2013
Especificaciones y Grados / Standard or Specification and Steel Grade Seamless Fittings according to ASTM A 234 WPB-10, NACE MR 01.75-2003 Conform to ASME II Ed. 2001 ASME SA-234, Grade WPB, NACE MR0103-2003		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
1	T64660	228	CODO 4 X 90° R.I. CED-STD	346	488	30	152					
2	T5584	20	CODO 6 X 90° R.C. CED-STD	333	500	38	163					
3	T64572	100	CODO 6 X 90° R.I. CED-STD	324	476	33	150					
4	T64680	60	CODO 6 X 45° CED-STD	331	476	33	155					
5	T64660	120	CODO 4 X 45° CED-STD	346	488	30	152					
6	T4465	50	CODO 3 X 45° CED-STD	380	504	30	148					
7	T64154	17	CODO 12 X 90° R.I. CED-STD	329	492	34	148					
8	T61153	1	CODO 12 X 90° R.I. CED-STD	269	462	37	142					
9	T63314	18	CODO 12 X 90° R.I. CED-STD	325	482	38	149					
10	T65038	36	CODO 10 X 45° CED-STD	339	488	34	148					
11	T65030	60	CODO 12 X 45° CED-STD	308	478	36	143					

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	T64660	64660	0.300	0.170	0.670	0.015	0.001	0.270	0.040	0.046	0.023	0.030	0.000	0.000
HF	T5584	5584	0.310	0.170	0.770	0.004	0.001	0.310	0.020	0.036	0.008	0.020	0.000	0.000
HF	T64572	64572	0.300	0.170	0.670	0.015	0.001	0.290	0.040	0.061	0.015	0.030	0.000	0.000
HF	T64660	64660	0.300	0.170	0.670	0.015	0.001	0.270	0.040	0.043	0.022	0.030	0.000	0.000
HF	T64660	64660	0.300	0.170	0.670	0.015	0.001	0.270	0.040	0.046	0.023	0.030	0.000	0.000
HF	T4465	4465	0.340	0.190	0.830	0.006	0.001	0.340	0.010	0.038	0.006	0.020	0.000	0.000
HF	T64154	64154	0.310	0.180	0.670	0.014	0.001	0.300	0.040	0.055	0.020	0.030	0.000	0.000
HF	T61153	61153	0.310	0.180	0.690	0.011	0.002	0.290	0.030	0.050	0.016	0.030	0.000	0.000
HF	T63314	63314	0.310	0.180	0.680	0.007	0.001	0.270	0.050	0.052	0.025	0.030	0.000	0.000
HF	T65038	65038	0.320	0.190	0.660	0.013	0.001	0.270	0.060	0.059	0.039	0.030	0.000	0.000
HF	T65030	65030	0.320	0.190	0.650	0.010	0.002	0.270	0.060	0.057	0.032	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°: 13023841 13015017 13019447 13029437 13023841 12052103 13018306 12053877 13020707 13027097 13029167

We certify that result of chemical analysis and mechanical test are true and correct copy of the last certificate issued by the manufacturer and/or supplier Raw material (Seamless Pipe) certs conform to ASTM A106 Grade B N°: 13023841 13015017 13019447 13029437 13023841 12052103 13018306 12053877 13020707 13027097 13029167

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 520°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	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	 <b>Quality Manager / Jefe de Calidad:</b> <b>ING. WALDO GALLEGOS GALVAN</b>	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.
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