



Tubos de Acero de México, S.A.  
Carr. Mty-Laredo Km 24.2  
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**CERTIFICADO DE CALIDAD  
INSPECTION CERTIFICATE**  
(DIN EN 10204:2004E - ISO 10474 3.1.B)

Numero:  
Number:  
28071

Pagina/Page:  
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Vendido a: PLESA ANAHUAC Y CIA. S.A. DE C.V.  
Sold to: PLESA ANAHUAC Y CIA. S.A. DE C.V.Pedido del Cliente No: 18402 -  
Customers Order No: 18402 -  
Lista de Empaque: 14592  
Packing List: 14592  
Fecha/Date: 29 de Octubre de 2013Especificaciones 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	T65689	10	TEE RED. 8 X 6 CED-STD	273	446	39	144					
2	T65548	4	TEE RED. 10 X 4 CED-STD	318	482	30	143					
3	T65886	10	TEE RED. 8 X 3 STD	551	481	35	141					
4	T65451	1	RED. CONC. 8 X 3 CED-STD	299	475	70	151					
5	T63084	1	RED. CONC. 8 X 3 CED-STD	248	463	37	149					
6	T66648	8	RED. CONC. 8 X 3 CED-STD	267	446	37	148					
7	T66949	4	TEE RED. 10 X 4 CED-RS	328	471	33	154					

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	T65689	65689	0.320	0.180	0.690	0.008	0.001	0.280	0.060	0.054	0.014	0.030	0.000	0.000
HF	T65548	65548	0.310	0.180	0.670	0.012	0.001	0.280	0.040	0.058	0.011	0.030	0.000	0.000
HF	T65886	65886	0.310	0.180	0.670	0.006	0.001	0.270	0.040	0.066	0.014	0.030	0.000	0.000
CF	T65451	65451	0.310	0.170	0.680	0.011	0.000	0.270	0.080	0.050	0.026	0.030	0.000	0.000
CF	T63084	63084	0.310	0.180	0.680	0.012	0.001	0.270	0.050	0.050	0.023	0.030	0.000	0.000
CF	T66648	66648	0.290	0.160	0.680	0.009	0.001	0.290	0.040	0.072	0.015	0.040	0.000	0.000
HF	T66949	66949	0.310	0.170	0.670	0.006	0.001	0.280	0.070	0.066	0.013	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°: 13047009 13047572 13049603 13034856 12086373 13064359 13065243

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°: 13047009 13047572 13049603 13034856 12086373 13064359 13065243

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

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

**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.