

**CERTIFICADO DE CALIDAD  
INSPECTION CERTIFICATE**  
(DIN EN 10204:2004E - ISO 10474.3.1.B)

Tubos de Acero de México, S.A.  
Carr. Mty-Laredo Km 24.2  
Aparado Postal 43  
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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: 3194 -  
Customers Order No: Dimensiones y tolerancias / Dimension and tolerances

Especificaciones y Grados / Standard or Specification and Steel Grade  
Seamless fittings according to ASTM A 234 "W", WPB-97, A234 "W", WPB-05a, NACE MR 0175-2003  
Conform to ASME II Ed. 2001 ASME SA-234 "W", Grade WPB.  
ASME B 16.9 - 2003 and ASME B 16.28 - 1994

DESCRIPCION DE MATERIAL / MATERIAL DESCRIPTION

ART. ITEM	COLADA HEAT CODE	CANTIDAD QUANTITY	DESCRIPCION / DESCRIPTION	ESF. CEDENCIA YIELD STRENGTH (Mpa)	ESF. RUPURA TENSILE STRENGTH (Mpa)	ELONG. %2"	DUREZA HARDNESS HB	DIMENSIONES SAMPLE DIM mm	1 Joules	2 Joules	3 Joules	PROMEDIO AVERAGE Joules
1	S49803	11	CODO 6 X 45° CED-XS	246	446	40	87	1				
2	S20539	9	CODO 6 X 45° CED-XS	302	474	41	92	1				
3	S21043	228	CODO 4 X 90° R.I. CED-STD	306	477	31	143	1				
4	T33843	40	CODO 10 X 90° R.I. CED-STD	287	476	35	86	1				
5	S43766	28	RED. CONC. 4 X 2 1/2 CED-STD	341	501	40	124	1				
6	S48250	22	RED. CONC. 4 X 2 1/2 CED-STD	316	493	32	115	1				

**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	S49803	49803	0.298	0.170	0.700	0.011	0.003	0.280	0.030	0.027	0.010	0.016	0.001	0.000
HF	S20539	20539	0.331	0.190	0.750	0.013	0.001	0.290	0.050	0.032	0.010	0.019	0.001	0.001
HF	S21043	21043	0.330	0.190	0.730	0.009	0.001	0.260	0.040	0.028	0.030	0.028	0.001	0.001
HF	T33843	33843	0.310	0.170	0.670	0.013	0.003	0.310	0.060	0.044	0.035	0.030	0.000	0.000
CF	S43766	43766	0.351	0.200	0.810	0.012	0.001	0.280	0.030	0.058	0.020	0.022	0.001	0.001
CF	S48250	48250	0.309	0.170	0.760	0.007	0.001	0.270	0.030	0.025	0.020	0.014	0.001	0.001

PRUEBAS MECANICAS / MECHANICAL TEST

PRUEBA DE IMPACTO 0°C / IMPACT TEST 0°C

Certificamos que los resultados de los Analisis Quimicos y Pruebas Mecanicas 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°.

355737 365216 365003 7028485 313950 345432

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"

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.

Notas:  
Formado en caliente a 620°C-880°C, enfriado al aire.  
Formed in hot normalized at 640°C max.  
Tiempo de permanencia 10'.  
Holding time 10'.  
Inspección Dimensional: Satisfactoria.  
Visual dimensional check: Satisfactory  
CF: FORMADO EN CALIENTE/HOT FORMED  
CF: FORMADO EN FRIO/COLD FORMED

Jefe de Calidad:  
Quality Manager:  
ING. JOSE MARTINEZ MACIAS