



**CERTIFICADO DE CALIDAD  
INSPECTION CERTIFICATE**

(DIN EN 10204 3.1.B - ISO 10474 3.1.B)

Vendido a: **TUBOS, CONEXIONES Y TANQUES, S.A. DE C.V.** Pedido del Cliente No: **7731, 7981, 7905** Lista de Empaque: **6836** Fecha/Date: **30 de Junio de 2004**

Sold to: **TUBOS, CONEXIONES Y TANQUES, S.A. DE C.V.** Customers Order No: **7731, 7981, 7905** Packing List: **6836**

Especificaciones y Grados / Standard or Specification and Steel Grade **ASME B 16.9 and ASME B 16.28 edition 2001** Dimensiones y tolerancias / Dimension and tolerances **Biselado / Bevelled ends**

Seamless Fittings according to ASTM/ASME A/SA 234 WPC - NACE MR **ASME B 16.9 and ASME B 16.28 edition 2001**

01.75 ed. 02 - Conform to ASME II Ed. 2001

ART. ITEM	COLADA HEAT CODE	CANTIDA QUANTITY	DESCRIPCION / DESCRIPTION	PRUEBAS MECANICAS / MECHANICAL TEST			PRUEBA DE IMPACTO 0°C / IMPACT TEST 0°C					
				ESF. CEBDENCIA YIELD STRENGTH (Mpa)	ESF. RUPTURA TENSILE STRENGTH (Mpa)	ELONG. %2"	DUREZA HARDNESS HB	DIMENSIONES SAMPLE DIM mm	1 Joules	2 Joules	3 Joules	PROMEDIO AVERAGE Joules
1	THV6	100	TBE 4" SCH.-STD.	310	473	42	141					
2	SC06	20	CONC. RBD. 4" X 3" SCH.-STD.	354	483	79	111					
3	TYM5	10	CONC. RBD. 6" X 5" SCH.-STD.	330	487	39	131					
4	SYA4	6	CONC. RBD. 2" X 1 1/4" SCH.-XH.	471	562	30	140					
5	RO3	2	CONC. RBD. 2" X 1 1/4" SCH.-XH.	350	528	35	120					
6	SDK6	60	ELLS 2" X 90° L.R. SCH.-XH.	437	509	31	141					
7	SSV5	150	CONC. RBD. 2 1/2" X 2" SCH.-STD.	339	488	29	128					
8	NJ5	10	TBE 3" SCH.-STD.	328	467	39	133					
9	TGUG	30	CONC. RBD. 8" X 6" SCH.-STD.	316	481	42	141					
10	THI6	21	ELLS 4" X 90° L.R. SCH.-STD.	350	498	40	137					
11	TFUG	207	ELLS 4" X 90° L.R. SCH.-STD.	356	525	31	128					

**ANALISIS QUIMICO / CHEMICAL ANALYSIS**

PROCESO PROCES	COLADA CODE	HEAT M.P./MOTHER PIPE	%C.E.	%C	%Mn	%P	%S	%Si	%Cr	%Cu	%Mo	%Ni	%V	%Nb
CF	THV6	16600	0.310	0.180	0.660	0.010	0.002	0.273	0.040	0.072	0.027	0.030	0.000	0.000
CF	SC06	29381	0.310	0.170	0.800	0.009	0.001	0.290	0.030	0.006	0.001	0.002	0.001	0.001
CF	TYM5	11584	0.301	0.170	0.670	0.008	0.004	0.260	0.040	0.069	0.021	0.040	0.000	0.000
CF	SYA4	43550	0.294	0.170	0.613	0.004	0.002	0.290	0.030	0.140	0.020	0.030	0.002	0.001
CF	RO3	30826	0.325	0.190	0.750	0.013	0.001	0.280	0.010	0.070	0.010	0.020	0.000	0.001
HP	SDK6	25784	0.338	0.200	0.820	0.009	0.002	0.100	0.003	0.004	0.002	0.000	0.001	0.001
CF	SSV5	22039	0.334	0.190	0.760	0.012	0.001	0.310	0.030	0.050	0.020	0.050	0.001	0.001
CF	NJ5	47744	0.339	0.190	0.610	0.010	0.001	0.250	0.130	0.105	0.060	0.037	0.001	0.001
CF	TGUG	15954	0.333	0.190	0.690	0.009	0.003	0.280	0.050	0.086	0.046	0.050	0.000	0.000
CF	THI6	15277	0.350	0.180	0.850	0.008	0.004	0.270	0.060	0.073	0.042	0.040	0.000	0.000
CF	TFUG	15444	0.315	0.180	0.670	0.009	0.003	0.280	0.070	0.079	0.003	0.050	0.000	0.000

Notes: Hot formed fittings in a range from 780°C to 940°C, cooled in still air. Cold formed normalized at 940°C max. Holding time: 10". Visual dimensional check. Satisfactory.

Formado en caliente a 780°C-940°C, enfriado al aire. Formado en frío normalizado a 940°C max. Tiempo de permanencia 10". Inspección Dimensional Satisfactoria.

Formado EN CALIENTE/HOT FORMED Formado EN FRIJO/COLD FORMED

Gerente de Aseguramiento de Calidad: **ING. JOSE MARTINEZ MACIAS**

Quality Assurance Manager: **ING. JOSE MARTINEZ MACIAS**

CC-008

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