

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

Numero: 10622
 Pagina/Page: 1 DE 1
 Fecha/Date: 18 de 2003

Vendido A: **TUBOS CONEXIONES Y TANQUES, S.A. DE C.V.**

Pedido del cliente No: **6604, 6653**

Lista de empaque: **6167**

Bocas / Ends
Biselado / Bevelled ends

Sold to:
 Especificaciones y Grados / Standard or Specification and Steel Grade
 Seamless Fittings according to ASTM/ASME A5A 234 WPB - NACE MR 01.75 ed. 02 -
 Conform to ASME II Ed. 2001

Customers Order No:
 Dimensiones y tolerancias / Dimension and tolerances
ASME B 16.9 and ASME B 16.28 edition 2001

Packing List:
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 HB	DIMENSIONES SAMPLE DIM mm	1 Joules	2 Joules	3 Joules	PROMEDIO AVERAGE Joules
1	SWSS	30	CODO 2 1/2 X 45 CED STD	343	487	37	131	N/A	N/A	N/A	N/A	N/A
2	LTS	30	CODO R.L. 2 1/2 X 90 CED XS	438	492	31	135	N/A	N/A	N/A	N/A	N/A
3	SVZ5	50	CODO 3 X 45 CED STD	338	489	34	136	N/A	N/A	N/A	N/A	N/A
4	TOK5	300	CODO 4 X 45 CED STD	372	506	38	131	N/A	N/A	N/A	N/A	N/A
5	SVX5	78	CODO R.L. 4 X 90 CED STD	335	482	35	136	N/A	N/A	N/A	N/A	N/A
6	SWQ5	378	CODO R.L. 4 X 90 CED STD	334	488	36	135	N/A	N/A	N/A	N/A	N/A
7	TUP5	9	CODO 8 X 45 CED STD	374	496	36	136	N/A	N/A	N/A	N/A	N/A
8	TWK5	11	CODO 8 X 45 CED STD	308	477	40	135	N/A	N/A	N/A	N/A	N/A
9	TXO5	10	CODO 8 X 45 CED STD	317	482	40	137	N/A	N/A	N/A	N/A	N/A

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	SWSS	26121	0.3290	1.90	0.780	0.009	0.001	0.310	0.020	0.030	0.010	0.010	0.001	0.001
HF	LTS	22281	0.3340	1.90	0.760	0.012	0.001	0.270	0.040	0.050	0.020	0.020	0.001	0.001
HF	SVZ5	25900	0.3570	2.00	0.800	0.011	0.002	0.270	0.050	0.030	0.050	0.020	0.001	0.001
HF	TOK5	98919	0.3070	1.70	0.680	0.010	0.003	0.270	0.050	0.078	0.029	0.040	0.000	0.000
HF	SVX5	26237	0.3130	1.80	0.730	0.010	0.001	0.270	0.020	0.030	0.020	0.020	0.001	0.001
HF	SWQ5	26238	0.3150	1.80	0.760	0.011	0.001	0.290	0.020	0.030	0.010	0.010	0.000	0.000
HF	TUP5	11195	0.3150	1.80	0.690	0.011	0.002	0.320	0.040	0.065	0.024	0.040	0.000	0.000
HF	TWK5	11793	0.3100	1.80	0.670	0.008	0.002	0.280	0.040	0.081	0.023	0.004	0.000	0.000
HF	TXO5	12430	0.3310	1.90	0.670	0.008	0.002	0.260	0.070	0.066	0.036	0.050	0.000	0.000

Notas:
 Formado en caliente a 780°C-940°C, enfriado al aire.
 Formado en frio normalizado a 940°C max.
 Tiempo de permeancia 10'
 Holding time 10'
 Visual dimensional check. Satisfactory.
 Inspeccion Dimensional. Satisfactoria.
 CF: FORMADO EN CALIENTE/HOT FORMED CF: FORMADO EN FRIO/COLD FORMED

Gerente de Aseguramiento de Calidad:
 Quality Assurance Manager: **ING. JOSE MARQUEZ MACIAS**

CC-008