

CERTIFICADO DE CALIDAD
INSPECTION CERTIFICATE

Numero:
Number: 1 0623

Pagina/Page:
1 DE 1

Tubos de Acero de Mexico, S.A.
Km 43.7 Carr. Mexico-Veracruz
Via Xalapa
(91697) Veracruz, Ver. Mexico
(52) 229 989 1100 tel
(52) 229 989 1120 fax

Fecha/Date: 18 de 2003

Lista de empaque:
Packing List: 6167

Bocas / Ends

Biselado / Bevelled ends

Pedido del cliente No: 6604, 6653

Customers Order No:

Dimensiones y tolerancias / Dimension and tolerances

ASME B 16.9 and ASME B 16.28 edition 2001

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

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

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

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	KC5	30	RED. CONC. 2 X 1 1/2 CED STD	372	503	36	137	N/A	N/A	N/A	N/A	N/A
2	SZ5	20	RED. CONC. 4 X 2 CED STD	333	468	39	156	N/A	N/A	N/A	N/A	N/A
3	AF5	5	RED. CONC. 4 X 3 CED XS	384	494	33	143	N/A	N/A	N/A	N/A	N/A
4	DU5	5	RED. CONC. 6 X 2 1/2 CED STD	352	484	33	137	N/A	N/A	N/A	N/A	N/A
5	TNV5	35	TEE 4 CED STD	305	473	42	135	N/A	N/A	N/A	N/A	N/A
6	TUT5	15	TEE 4 CED STD	320	499	40	135	N/A	N/A	N/A	N/A	N/A
7	TVM5	33	TEE 6 CED STD	315	480	46	139	N/A	N/A	N/A	N/A	N/A
8	TXM5	17	TEE 6 CED STD	344	512	42	139	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
CF	KC5	22069	0.3160	1.80	0.700	0.010	0.001	0.280	0.050	0.040	0.020	0.030	0.001	0.001
CF	SZ5	48349	0.3290	1.40	1.030	0.010	0.001	0.260	0.030	0.080	0.020	0.020	0.001	0.001
CF	AF5	95110	0.3030	1.80	0.659	0.003	0.001	0.327	0.027	0.068	0.002	0.030	0.002	0.000
CF	DU5	95891	0.3040	1.70	0.670	0.006	0.002	0.260	0.050	0.075	0.024	0.040	0.000	0.000
CF	TNV5	98562	0.3190	1.90	0.670	0.007	0.002	0.280	0.020	0.076	0.029	0.030	0.000	0.000
CF	TUT5	10764	0.3310	1.70	0.760	0.010	0.001	0.290	0.060	0.082	0.055	0.090	0.000	0.000
CF	TVM5	11313	0.3320	1.80	0.750	0.008	0.003	0.260	0.050	0.079	0.043	0.040	0.000	0.000
CF	TXM5	10137	0.3370	1.90	0.690	0.007	0.004	0.270	0.070	0.092	0.047	0.030	0.000	0.000

Certificamos que los resultados de los Analisis Quimicos y Pruebas Mecanicas son verdaderas o una copia fiel de los certificados enviados por el Fabricante y/o el proveedor de Materia Prima 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 certs N°:

03003742 02004702
02007112 02019475 03006051
03008025 03010901

Notas:

Formado en caliente a 780°C-940°C, enfriado al aire. Formado en frio normalizado a 940°C max. Tiempo de permanencia 10'.

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'.

Inspeccion Dimensional: Satisfactoria

Visual dimensional check: Satisfactory

CF: FORMADO EN CALIENTE/HOT FORMED

Gerente de Aseguramiento de Calidad:

Quality Assurance Manager:

ING. JOSE MARTINEZ MACIAS

CC-008