

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

Numero Number
10100

Pagina/Page
1 DE 1

TUBERIA Y VALVULAS DE MEXICO, S.A. DE C.V.

Productos y Grados / Standard or Specification and Steel Grade
Certificados according to ASTM/ASME A53 A234 WPB - NACE MR 01.75 ed. 02 -
ASME II Ed. 2001

Pedido del cliente No. 92, 93, 94, 95, 96
Customers Order No.
Dimensiones y tolerancias / Dimension and tolerances
ASME B 16.9 and ASME B 16.26 edition 2001

Lista de empaque 5839
Packing List:
Bocas / Ends
Biselado / Bevelled ends

Fecha/Date
ABRIL 10 de 2003

DESCRIPCION DE MATERIAL / MATERIAL DESCRIPTION

COLADA HEAT CODE	CANTIDAD QUANTITY	DESCRIPCION / DESCRIPTION
TC5	100	TEE 2 CED STD
HQ4	75	TEE 2 CED XS
K55	25	TEE 2 CED XS
Q25	40	TEE 2 1/2 CED STD ✓
NJ5	200	TEE 3 CED STD
RU5	150	TEE 3 CED XS
NV5	200	TEE 4 CED STD
SI5	250	TEE 4 CED XS
MV5	20	TEE 6 CED XS
ND5	10	TEE RED. 10 X 6 CED XS

PRUEBAS MECANICAS / MECHANICAL TEST

ESF. CEDENCIA YIELD STRENGTH (MPa)	ESF. RUPTURA TENSILE STRENGTH (MPa)	ELONG % ^{2"}	DUREZA HARDNESS HB
328	476	38	146
348	495	36	125
329	553	27	156
311	471	36	197
328	467	39	133
309	465	40	132
305	473	42	135
284	465	43	134
315	496	30	144
313	482	45	147

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

DIMENSIONES SAMPLE DIM mm	1 Joules	2 Joules	3 Joules	PROMEDIO AVERAGE Joules
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A

ANALISIS QUIMICO / CHEMICAL ANALYSIS

COLADA HEAT CODE	COLADA/HEAT M.P./MOTHER PIPE	%C.E.	%C	%Mn	%P	%S	%Si	%Cr	%Cu	%Mo	%Ni	%V	%Nb
TC5	49650	0.3220	0.190	0.650	0.010	0.001	0.240	0.050	0.100	0.020	0.044	0.001	0.001
HQ4	KB99AK	0.3130	0.160	0.800	0.008	0.003	0.210	0.070	0.010	0.020	0.020	0.000	0.000
K55	44366	0.3110	0.180	0.640	0.014	0.003	0.270	0.030	0.176	0.010	0.059	0.001	0.001
Q25	EG98DC	0.3100	0.170	0.730	0.004	0.012	0.230	0.050	0.020	0.020	0.040	0.001	0.001
NJ5	47744	0.3190	0.190	0.610	0.010	0.001	0.250	0.130	0.105	0.060	0.037	0.001	0.001
RU5	KJ02RW	0.3090	0.170	0.740	0.006	0.004	0.210	0.050	0.020	0.010	0.030	0.001	0.000
NV5	98562	0.3190	0.190	0.670	0.007	0.002	0.280	0.020	0.076	0.029	0.030	0.000	0.000
SI5	EM02PR	0.3170	0.180	0.710	0.008	0.008	0.230	0.050	0.020	0.010	0.050	0.010	0.005
MV5	98362	0.3290	0.190	0.500	0.005	0.004	0.280	0.060	0.070	0.034	0.040	0.000	0.000
ND5	67012	0.3140	0.180	0.670	0.007	0.001	0.270	0.040	0.070	0.034	0.040	0.000	0.000

Certificamos que los resultados de los Analisis Quimicos y Pruebas Mecanicas son verdaderos o una copia fiel de los certificados enviados por el Fabricante
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.
Material certs N°
43513 0334 41650
0468 02019475
02016326 02016325

Nota:
Not formed length in a range from 780°C to 940°C. Coated in salt
Cada norma normalizada al 94°C max.
Holding time: 10'
Visual dimensional check. Satisfaction:
EN CALIENTE/HOT FORMEE O FORMADO EN FRIO/COLD FORMED

Gerente de Aseguramiento de Calidad.
Quality Assurance Manager.