

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

Numero:
Number:
9945

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Empresas Riga, S.A. De C.V.
Carr. My-Laredo Km. 24.2
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Vendido A: TUBOS CONEXIONES Y TANQUES, S.A. DE C.V.	Pedido del cliente No: 5601, 5614, 5690	Lista de empaque: 5824	Fecha/Date: MARZO 10 de 2003
Sold to:	Customers Order No:	Packing List:	
Especificaciones y Grados / Standard or Specification and Steel Grade Seamless Fittings according to ASTM/ASME AISA 234 WPB - NACE MR 01.75 ed. 02 - Conform to ASME II Ed. 2001	Dimensiones y tolerancias / Dimension and tolerances ASME B 16.9 and ASME B 16.28 edition 2001	Bocas / Ends 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. RUP.TURA TENSILE STRENGTH (MPa)	ELONG. %2"	DUREZA HARDNESS HB	DIMENSIONES SAMPLE DIM mm.	1 Joules	2 Joules	3 Joules	PROMEDIO AVERAGE Joules
1	MZ5	64	TEE 8 SCH STD	311	468	42	135	N/A	N/A	N/A	N/A	N/A
2	QV5	10	RED. TEE 12 X 8 SCH STD	345	470	52	146	N/A	N/A	N/A	N/A	N/A
3	SAS	10	RED. TEE 2 X 1 1/2 SCH STD	372	527	40	141	N/A	N/A	N/A	N/A	N/A
4	KW5	25	RED. TEE 4 X 3 SCH STD	320	462	38	156	N/A	N/A	N/A	N/A	N/A
5	OF5	30	RED. TEE 6 X 4 SCH STD	353	506	41	134	N/A	N/A	N/A	N/A	N/A
6	MP5	5	RED. TEE 8 X 4 SCH XH	283	483	35	143	N/A	N/A	N/A	N/A	N/A
7	LMS	20	RED. TEE 8 X 6 SCH STD	309	506	38	140	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	MZ5	98081	0.3230	0.190	0.660	0.007	0.002	0.270	0.050	0.074	0.025	0.040	0.000	0.000
CF	QV5	99719	0.2950	0.170	0.660	0.009	0.004	0.270	0.040	0.036	0.018	0.020	0.000	0.000
CF	SAS	M33245	0.3000	0.230	0.390	0.018	0.010	0.210	0.020	0.010	0.000	0.010	0.000	0.000
CF	KW5	45137	0.3210	0.180	0.650	0.008	0.002	0.230	0.070	0.120	0.030	0.060	0.001	0.001
CF	OF5	98922	0.3370	0.180	0.780	0.006	0.003	0.260	0.050	0.073	0.049	0.040	0.000	0.000
CF	MP5	97620	0.3420	0.180	0.840	0.008	0.003	0.300	0.050	0.080	0.020	0.040	0.000	0.000
CF	LMS	96316	0.3590	0.190	0.860	0.006	0.002	0.290	0.050	0.064	0.045	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 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°:
02015500 03001702 QLC199912S0
42230 02019135 02015813
02013955

Notes:
Formado en caliente a 780°C-940°C, enfriado al aire / Formed in the normalized at 840°C max. Holding time 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'.
Visual dimensional check. Satisfactory.
H.F. FORMADO EN CALIENTE/HOT FORMED C.F. FORMADO EN FRIJO/COLD FORMED

Gerente de Aseguramiento de Calidad:
Quality Assurance Manager:

ING. JOSE MARTINEZ MACIAS

CC-008