

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

Empresas Riga, S.A. De C.V.
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Vendido A: TUBOS CONEXIONES Y TANQUES, S.A. DE C.V.	Pedido del cliente No: 5495	Lista de empaque: 5759	Fecha/Dat: 11 de 2003
Sold to: 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	Customers Order No: Dimensiones y tolerancias / Dimension and tolerances ASME B 16.9 and ASME B 16.28 edition 2001	Packing List: 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. RUPTURA TENSILE STRENGTH (MPa)	ELONG. % ^{2"}	DUREZA HARDNESS HB	DIMENSIONES SAMPLE DIM mm	1 Joules	2 Joules	3 Joules	PROMEDIO AVERAGE Joules
1	EC5	50	CONC. RED. 6 X 4 SCH STD	352	486	31	132	N/A	N/A	N/A	N/A	N/A
2	FE5	10	CONC. RED. 6 X 4 SCH XH	280	466	44	135	N/A	N/A	N/A	N/A	N/A
3	CN5	30	CONC. RED. 8 X 4 SCH STD	314	471	34	141	N/A	N/A	N/A	N/A	N/A
4	HR5	7	CONC. RED. 8 X 6 SCH STD	290	474	43	144	N/A	N/A	N/A	N/A	N/A
5	IN5	13	CONC. RED. 8 X 6 SCH STD	306	473	44	143	N/A	N/A	N/A	N/A	N/A
6	NV5	40	TBE 4 SCH STD	305	473	42	135	N/A	N/A	N/A	N/A	N/A
7	KW5	30	RED. TBE 4 X 3 SCH STD	320	462	38	156	N/A	N/A	N/A	N/A	N/A

ANALISIS QUIMICO / CHEMICAL ANALYSIS														
PROCESO PROCESS	COLADA HEAT CODE	COLADAV/HEAT M.P./MOTHER PIPE	%C.E.	%C	%Mn	%P	%S	%Si	%Cr	%Cu	%Mo	%Ni	%V	%Nb
CF	EC5	96342	0.3180	0.180	0.670	0.007	0.003	0.300	0.050	0.075	0.045	0.040	0.000	0.000
CF	FE5	96603	0.3130	0.180	0.660	0.009	0.002	0.260	0.040	0.070	0.040	0.040	0.000	0.000
CF	CN5	95936	0.2940	0.160	0.660	0.004	0.003	0.270	0.050	0.062	0.038	0.040	0.000	0.000
CF	HR5	97024	0.3250	0.190	0.680	0.009	0.003	0.290	0.050	0.070	0.021	0.040	0.000	0.000
CF	IN5	97274	0.3110	0.170	0.710	0.010	0.002	0.290	0.050	0.061	0.034	0.030	0.000	0.000
CF	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
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

Notes:
Formado en caliente a 780°C-940°C, enfriado al aire/Formado en fire normalized a 940°C. max.
Tempo de permanencia 10'.
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.

Inspeccion Dimensional: Satisfactoria
Visual dimensional check: Satisfactory

HE: FORMADO EN CALIENTE/HOT FORMED CF: FORMADO EN FRIOCOLD FORMED

Gerente de Aseguramiento de Calidad:
Quality Assurance Manager: ING. JOSÉ MARTINEZ MACIAS

CC-008

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°:
02007624 02008570 02006432
02011468 02012275 02019475
42230