



Tenaris Group

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

Empresas Riga, S.A. De C.V.
Carr. Mty-Laredo Km. 24.2
Ciénega de Flores, N.L. 65550
Tel: (81) 83-44-88-60
Fax: (81) 83-44-88-01

Vendido A: TUBOS CONEXIONES Y TANQUES, S.A. DE C.V.	Pedido del cliente No: 5888	Lista de empaque: 5942	Fecha/Date: MAYO 9 de 2003
Sold to:	Customers Order No:	Packing List:	Bocas / Ends
Especificaciones y Grados / Standard or Specification and Steel Grade		Dimensiones y tolerancias / Dimension and tolerances	
Seamless Fittings according to ASTM/ASME A5A 234 WPB - NACE MR 01.75 ed. 02 -		ASME B 16.9 and ASME B 16.28 edition 2001	
Conform to ASME II Ed. 2001		Biselado / Bevelled ends	

ART. ITEM	COLADA HEAT CODE	CANTIDAD QUANTITY	DESCRIPCION / DESCRIPTION	ESF. CEDENCIA YIELD STRENGTH (MPa)	ESF. RUPTURA TENSILE STRENGTH (MPa)	ELONG. %2"	DUREZA HARDNESS HR	PRUEBA DE IMPACTO 0°C / IMPACT TEST 0°C				
1	TU5	141	CODO R.L. 6 X 90 CED STD	331	493	38	136	N/A	1	2	3	PROMEDIO AVERAGE Joules
2	JK5	60	CODO R.L. 8 X 90 CED STD	303	487	38	137	N/A	N/A	N/A	N/A	N/A
3	TF5	120	CODO R.L. 8 X 90 CED STD	341	499	40	137	N/A	N/A	N/A	N/A	N/A
4	QO5	20	RED. CONC. 12 X 10 CED STD	322	462	33	144	N/A	N/A	N/A	N/A	N/A
5	SV5	50	RED. CONC. 2 1/2 X 2 CED STD	339	488	29	128	N/A	N/A	N/A	N/A	N/A
6	JY5	50	RED. CONC. 3 X 2 CED STD	337	491	34	141	N/A	N/A	N/A	N/A	N/A
7	CN5	20	RED. CONC. 8 X 4 CED STD	314	471	34	141	N/A	N/A	N/A	N/A	N/A
8	RW5	20	RED. CONC. 8 X 6 CED STD	321	476	44	139	N/A	N/A	N/A	N/A	N/A
9	NT5	4	TEE 12 CED STD	347	481	48	146	N/A	N/A	N/A	N/A	N/A

PROCESO PROCESS	COLADA HEAT CODE	COLADA/HEAT M.P./MOTHER PIPE	%C.E.	%C	%Mn	%P	%S	%Si	%Cr	%Cu	%Mo	%Ni	%V	%Nb	ANALISIS QUIMICO / CHEMICAL ANALYSIS					
HF	TU5	10764	0.343	0.180	0.770	0.011	0.002	0.290	0.060	0.087	0.055	0.090	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°.					
HF	JK5	97449	0.345	0.180	0.840	0.006	0.001	0.260	0.050	0.067	0.035	0.050	0.000	0.000	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°:					
HF	TF5	10406	0.328	0.180	0.760	0.013	0.003	0.290	0.050	0.061	0.025	0.030	0.000	0.000	03005068	02013049	03003979			
CF	QO5	99323	0.321	0.180	0.730	0.009	0.003	0.250	0.040	0.063	0.021	0.040	0.000	0.000	03001188	152468	152476			
CF	SV5	22039	0.334	0.190	0.760	0.012	0.001	0.310	0.030	0.050	0.020	0.050	0.001	0.001	02006432	03002508	02018311			
CF	JY5	22138	0.315	0.180	0.730	0.010	0.001	0.310	0.030	0.050	0.010	0.020	0.001	0.001						
CF	CN5	95936	0.294	0.160	0.660	0.004	0.003	0.270	0.050	0.062	0.038	0.040	0.000	0.000						
CF	RW5	99646	0.309	0.180	0.650	0.007	0.000	0.260	0.040	0.080	0.024	0.040	0.000	0.000						
CF	NT5	98847	0.317	0.180	0.650	0.010	0.003	0.270	0.070	0.064	0.041	0.030	0.000	0.000						

Notas: Formado en caliente a 780°C-840°C, enfriado al aire, Formado en frio normalizado a 940°C max. Tiempo de permanencia 10'.
Inspeccion Dimensional: Satisfactoria. Visual dimensional check: Satisfactory.
HF: FORMADO EN CALIENTE/HOT FORMED CF: FORMADO EN FRIO/COLD FORMED

Notas: 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.

Gerente de Aseguramiento de Calidad: **ING. JOSE MARTINEZ MACIAS**

Quality Assurance Manager: **ING. JOSE MARTINEZ MACIAS**

CC-008