Riga
Tenaris Group

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

Numero: Number: 9771

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

Pedido del cliente No: Customers Order No: 3867, 4361, 5400, 5427

Lista de empaque: Packing List: 5745

Fecha/Date: ENERO 28 de 2003

Especificaciones y Grados / Standard or Specification and Steel Grade
Seamless Fittings according to ASTM/ASME A/SA 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 0ºC / IMPACT TEST 0ºC				
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	JP5	20	CODO R.L. 6 X 90 CED STD	319	478	43	136	N/A	N/A	N/A	N/A	N/A
2	PC5	146	CODO R.L. 6 X 90 CED STD	338	509	39	124	N/A	N/A	N/A	N/A	N/A
3	DC5	36	CODO R.L. 8 X 90 CED XS	309	474	42	140	N/A	N/A	N/A	N/A	N/A
4	KH5	10	RED. CONC. 10 X 4 CED STD	328	480	42	147	N/A	N/A	N/A	N/A	N/A
5	KH5	18	RED. CONC. 10 X 8 CED STD	328	480	42	147	N/A	N/A	N/A	N/A	N/A
6	MS5	22	RED. CONC. 10 X 8 CED STD	301	464	44	146	N/A	N/A	N/A	N/A	N/A
7	IX5	60	RED. CONC. 4 X 2 CED XS	316	499	32	141	N/A	N/A	N/A	N/A	N/A
8	BX5	8	RED. CONC. 6 X 4 CED XS	303	476	37	140	N/A	N/A	N/A	N/A	N/A
9	LL5	1	RED. CONC. 6 X 4 CED XS	296	482	40	137	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
HF	JP5	97447	0.321	0.180	0.680	0.006	0.001	0.260	0.060	0.077	0.040	0.040	0.000	0.000
HF	PC5	99245	0.324	0.170	0.800	0.010	0.002	0.270	0.050	0.057	0.026	0.030	0.000	0.000
HF	DC5	95892	0.301	0.170	0.680	0.006	0.001	0.260	0.040	0.069	0.013	0.030	0.000	0.000
CF	KH5	95768	0.323	0.180	0.660	0.009	0.004	0.270	0.070	0.060	0.056	0.050	0.000	0.000
CF	KH5	95768	0.323	0.180	0.660	0.009	0.004	0.270	0.070	0.060	0.056	0.050	0.000	0.000
CF	MS5	98081	0.313	0.180	0.660	0.007	0.002	0.280	0.050	0.076	0.026	0.040	0.000	0.000
CF	IX5	96135	0.316	0.180	0.660	0.006	0.002	0.290	0.050	0.077	0.043	0.040	0.000	0.000
CF	BX5	95795	0.302	0.170	0.660	0.006	0.002	0.270	0.050	0.061	0.031	0.030	0.000	0.000
CF	LL5	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

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 Nº:

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 suplier Raw material certs Nº:

02013838 03000283 02006615
02007292 02015502 02008108
02006243 02013191

Notas:
Formado en caliente a 780ºC-940ºC, enfriado al aire;Formado en frio normalizado a 940ºC max.
Tiempo de permanencia 10'.
Inspeccion Dimensional: Satisfactoria.

Notes:
Hot formed fittings in a range from 780ºC to 940ºC, Cooled in still air;
Cold formed normalized at 940ºC max.
Holding time 10'.
Visual dimensional check: Satisfactory.

HF: FORMADO EN CALIENTE/HOT FORMED CF: FORMADO EN FRIO/COLD FORMED

Gerente de Aseguramiento de Calidad:
Quality Assurance Mannager:

ING. JOSE MARTINEZ MACIAS

CC-008