Riga
Tenaris Group

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

Numero / Number: [illegible]
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Vendido A / Sold to: TUCOTA	Pedido del cliente No. / Customers Order No	Lista de empaque / Packing List: 6465	Fecha / Date: ENERO 16 de 2004
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 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	TXZ5	38	TEE RED. 8 X 4 CED STD	320	495	40	141	N/A	N/A	N/A	N/A	N/A
2	TSP5	1	TEE RED. 10 X 5 CED STD	340	502	43	137	N/A	N/A	N/A	N/A	N/A
3	TJ5	16	CODO 16 X 45 CED XS	338	488	45	135	N/A	N/A	N/A	N/A	N/A
4	TYI5	24	TEE 10 CED STD	331	502	42	140	N/A	N/A	N/A	N/A	N/A
5	TYN5	10	TEE RED. 10 X 6 CED STD	341	508	42	139	N/A	N/A	N/A	N/A	N/A
6	TSP5	2	TEE RED. 10 X 6 CED STD	340	502	43	137	N/A	N/A	N/A	N/A	N/A
7	TXP5	2	TEE RED. 6 X 4 CED STD	323	491	46	144	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	TXZ5	12536	0.324	0.180	0.670	0.009	0.000	0.270	0.060	0.074	0.046	0.100	0.000	0.000
CF	TSP5	10025	0.328	0.180	0.740	0.007	0.003	0.280	0.060	0.092	0.024	0.030	0.000	0.000
HF	TJ5	98505	0.330	0.180	0.750	0.007	0.002	0.250	0.050	0.077	0.035	0.040	0.000	0.000
CF	TYI5	12438	0.342	0.180	0.780	0.013	0.001	0.290	0.080	0.078	0.033	0.070	0.000	0.000
CF	TYN5	11686	0.341	0.180	0.790	0.013	0.002	0.270	0.080	0.069	0.029	0.040	0.000	0.000
CF	TSP5	10025	0.328	0.180	0.740	0.007	0.003	0.280	0.060	0.092	0.024	0.030	0.000	0.000
CF	TXP5	12167	0.327	0.190	0.690	0.010	0.016	0.280	0.050	0.077	0.020	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°:
03012927 03004[illegible] [illegible]
03012[illegible] 03012[illegible]
03011290

Notas
Formado en [illegible] Formado en frio normalizado a 940°C max
Tiempo de permanencia 10
Inspección Ordinaria de Satisfacción
[illegible]

Notas
[illegible]
Cold formed normalized at 940°C max
Holding time 10
[illegible]

Gerente de Aseguramiento de Calidad
Quality Assurance Manager

ING. JOSE MARTINEZ MATTAS