Tenaris

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

Numero: Number: 11839

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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: Sold to: TUCOTA

Pedido del Cliente No: Customers Order No: 7981

Lista de Empaque: Packing List: 6653

Fecha/Date: 29 de Marzo 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

Factura/Invoice:
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	CANTIDA 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	SOZ5	528	CODO 3 X 90 R.L. CED STD	345	482	39	136					
2	SCJ6	456	CODO 4 X 90 R.L. CED STD	343	489	36	148					
3	SVK5	100	CODO 4 X 90 R.L. CED XS	330	482	39	137					
4	SCV6	100	CODO 4 X 45 CED STD	343	487	36	136					
5	SDH6	20	CODO 4 X 45 CED XS	319	485	40	129					
6	SZL5	150	CODO 1 1/2 X 90 R.L. CED STD	367	521	51	133					
7	TMC5	200	CODO 1 X 90 R.L. CED STD	254	432	60	124					
8	BN5	120	CODO 1 1/4 X 90 R.L. CED STD	334	514	50	124					
9	JX5	80	CODO 1 1/4 X 90 R.L. CED STD	390	536	54	128					
10	SUU5	100	CODO 2 X 90 R.L. CED STD	353	491	33	125					

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	SOZ5	23881	0.327	0.190	0.740	0.011	0.001	0.290	0.030	0.030	0.020	0.020	0.001	0.001
HF	SCJ6	29382	0.320	0.180	0.780	0.010	0.001	0.300	0.020	0.040	0.010	0.020	0.001	0.001
HF	SVK5	26013	0.339	0.180	0.830	0.010	0.001	0.310	0.040	0.050	0.030	0.040	0.001	0.001
HF	SCV6	29383	0.332	0.190	0.800	0.009	0.001	0.300	0.020	0.030	0.010	0.010	0.001	0.001
HF	SDH6	29755	0.321	0.180	0.770	0.009	0.001	0.300	0.040	0.030	0.010	0.010	0.000	0.000
HF	SZL5	25296	0.324	0.180	0.790	0.010	0.002	0.290	0.030	0.040	0.010	0.020	0.001	0.001
HF	TMC5	21646	0.257	0.150	0.540	0.008	0.001	0.209	0.039	0.057	0.019	0.028	0.001	0.000
HF	BN5	43300	0.325	0.180	0.770	0.010	0.000	0.300	0.040	0.040	0.020	0.020	0.001	0.001
HF	JX5	21962	0.334	0.180	0.810	0.010	0.001	0.290	0.040	0.040	0.030	0.030	0.001	0.001
HF	SUU5	25397	0.328	0.190	0.740	0.009	0.002	0.310	0.030	0.060	0.010	0.040	0.001	0.001

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:

158102 180213 165681
180213 180216 164723
T-1128/1 2005327 152467
164722

"Este material cumple con los requerimientos especificados en la orden"
"The material of this certificate heat number mentioned above is in compilance with the requirements specified in the order".

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

Notes:
Hot formed fittings in a range from 780°C to 940°C, cooled in still air.
Cold formed nomalized at 940°C max.
Holding time 10'
Visual dimensionalcheck: 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