Tenaris

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

CERTIFICADO DE CALIDAD
INSPECTION CERTIFICATE

01.75 ed. 02 - Conform to ASME II Ed. 200

Numero: Number:	Pagina/Page:
11644	1 DE 1

Vendido a: Sold to: TUCOTA	Pedido del Cliente No: Customers Order No:	Lista de Empaque: Packing List: 6568	Fecha/Date: 26 de Febrero de 2004

Especificaciones y Grados / Standard or Specification and Steel Grade	Dimensiones y tolerancias / Dimension and tolerances	Bocas / Ends
Seamless Fittings according to ASTM/ASME A/SA 234 WPB - NACE MR **01.75 ed. 02 - Conform to ASME II Ed. 2001**	**ASME B 16.9 and ASME B 16.28 edition 2001**	**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 AVERAG Joules
1	SZL5	150	CODO R.L. 1 1/2 X 90 CED STD	367	521	51	133					
2	TBJ6	10	CODO 12 X 45 CED STD	327	490	42	138					
3	TXZ5	8	CODO 12 X 45 CED STD	320	495	40	141					
4	TZX5	6	CODO 12 X 45 CED STD	327	484	46	135					
5	TVB5	10	CODO R.L. 12 X 90 CED 40	330	487	46	135					
6	TYH5	18	CODO 14 X 45 CED STD	323	488	42	139					
7	TAC6	12	CODO R.L. 14 X 90 CED STD	326	492	46	139					
8	TWE5	12	CODO R.L. 14 X 90 CED STD	321	486	42	140					
9	SN5	25	CODO 2 X 45 CED XS	332	483	41	130					

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	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	TBJ6	12774	0.327	0.190	0.650	0.008	0.002	0.260	0.070	0.062	0.038	0.040	0.000	0.000
HF	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
HF	TZX5	13191	0.322	0.180	0.660	0.007	0.002	0.260	0.060	0.064	0.065	0.040	0.000	0.000
HF	TVB5	96315	0.316	0.180	0.650	0.007	0.004	0.270	0.050	0.077	0.047	0.040	0.000	0.000
HF	TYH5	12538	0.341	0.180	0.750	0.010	0.000	0.290	0.090	0.071	0.052	0.050	0.000	0.000
HF	TAC6	13191	0.312	0.170	0.660	0.006	0.002	0.250	0.060	0.062	0.064	0.040	0.000	0.000
HF	TWE5	11782	0.295	0.160	0.670	0.010	0.034	0.260	0.050	0.094	0.035	0.004	0.000	0.000
HF	SN5	24683	0.344	0.190	0.790	0.007	0.001	0.280	0.050	0.040	0.040	0.020	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:

164723 03018788 03012927
03015384 02008517 03012990
03014802 03009107 160515

"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.

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

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

Gerente de Aseguramiento de Calidad:
Quality Assurance Mannager:

ING. JOSE MARTINEZ MACIAS

CC-008