

**CERTIFICADO DE CALIDAD**  
**INSPECTION CERTIFICATE**

Numero:  
11083

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Empresas Riga, S.A. De C.V.  
Carr. Mty-Laredo Km. 24.2  
Cieneaga de Flores, N.L. 65550  
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(DIN EN 10204 3.1.B - ISO 10474 3.1.B)

Pedido del cliente No: **6366, 7020, 7169, 7273.**

Customers Order No:

Lista de empaque:  
Packing List:

6340

Fecha/Date:  
**NOVIEMBRE 11 de 2003**

Dimensiones y tolerancias / Dimension and tolerances

Bocas / Ends

ASME B 16.9 and ASME B 16.28 edition 2001

Biselado / Bevelled ends

Vendido A: **TRUCORA**  
Sold to:  
Especificaciones y Grados / Standard or Specification and Steel Grade  
Seamless Fittings according to ASTM/ASME ASA 234 WPB - NACE MR 01.75 ed. 02 -  
Conform to ASME II Ed. 2001

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. RUPURA / TENSILE STRENGTH (MPa)	ELONG. / %2"	DUREZA / HARDNESS HB	DIMENSIONES / SAMPLE DIM mm	1 Joules	2 Joules	3 Joules	PROMEDIO / AVERAGE Joules
1	TUW5	6	ELLS 8 X 90 L.R. SCH. XH	277	487	41	139	N/A	N/A	N/A	N/A	N/A
2	TUX5	3	ELLS 16 X 45 SCH. XH	316	483	45	141	N/A	N/A	N/A	N/A	N/A
3	SSN5	100	ELLS 2 X 90 L.R. SCH. XH	332	483	41	130	N/A	N/A	N/A	N/A	N/A
4	SXB5	150	ELLS 3 X 90 L.R. SCH. XH	321	473	38	143	N/A	N/A	N/A	N/A	N/A
5	TAB6	85	ELLS 6 X 90 L.R. SCH. XH	318	478	40	136	N/A	N/A	N/A	N/A	N/A
6	TZV5	9	ELLS 16 X 90 L.R. SCH. STD	338	490	39	135	N/A	N/A	N/A	N/A	N/A
7	TXZ5	6	ELLS 12 X 45 SCH. STD	320	495	40	141	N/A	N/A	N/A	N/A	N/A
8	TVI5	7	ELLS 12 X 45 SCH. STD	328	488	44	143	N/A	N/A	N/A	N/A	N/A
9	TXA5	11	ELLS 12 X 45 SCH. STD	323	506	44	140	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	TUW5	11195	0.3070	1.70	0.700	0.012	0.001	0.310	0.040	0.065	0.025	0.040	0.000	0.000
HF	TUX5	10916	0.3380	1.90	0.740	0.010	0.002	0.290	0.050	0.097	0.029	0.040	0.000	0.000
HF	SSN5	24683	0.3440	1.90	0.790	0.007	0.001	0.280	0.050	0.040	0.040	0.020	0.001	0.001
HF	SXB5	26168	0.3250	1.80	0.810	0.008	0.001	0.290	0.020	0.040	0.010	0.020	0.001	0.001
HF	TAB6	13369	0.3070	1.70	0.670	0.014	0.002	0.270	0.060	0.055	0.039	0.030	0.000	0.000
HF	TZV5	13342	0.3180	1.80	0.690	0.010	0.004	0.280	0.050	0.069	0.034	0.030	0.000	0.000
HF	TXZ5	12536	0.3240	1.80	0.670	0.009	0.000	0.270	0.060	0.074	0.046	0.100	0.000	0.000
HF	TVI5	11368	0.3140	1.80	0.660	0.008	0.001	0.260	0.050	0.077	0.030	0.050	0.000	0.000
HF	TXA5	11782	0.3260	1.90	0.660	0.012	0.003	0.270	0.050	0.092	0.036	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°:  
03006646 03006156 160515  
165678 03017150 03015089  
03012927 03007806 03010111

Notas:  
Formado en caliente a 780°C-940°C, enfriado al aire.  
Formado en frio normalizado a 940°C max.  
Tiempo de paragrama 10'  
Holding time 10'  
Visual dimensional check: Satisfactory.  
Visual dimensional check: Satisfactory.  
CF: FORMADO EN FRIO/COLD FORMED

Gerente de Aseguramiento de Calidad:  
Quality Assurance Manager:  
**ING. JOSE MARTINEZ MACIAS**

CC-008