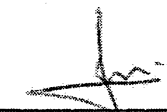


CERTIFICADO DE CALIDAD INSPECTION CERTIFICATE		Numero: Number:	Pagina/Page:
01.75 ed. 02 - Conform to ASME II Ed. 200		11644	1 DE 1
Vendido a: Sold to:	Pedido del Cliente No: Customers Order No:	Lista de Empaque: Packing List:	Fecha/Date:
TUCOTA		6568	26 de Febrero de 2004
Especificaciones y Grados / 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	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	TYV5	25	CODO 10 X 45 CED XS	332	483	41	130					

ANALISIS QUIMICO / CHEMICAL ANALYSIS															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°: 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 compliance with the requirements specified in the order*.
PROCESO PROCESS	COLADA HEAT CODE	HEAT M.P./MOTHER PIPE	%C.E.	%C	%Mn	%P	%S	%Si	%Cr	%Cu	%Mo	%Ni	%v	%Nb	
HF	SZL5	25295	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	TYV5	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	

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	Notes: Hot formed fittings in a range from 780°C to 940°C, cooled in still air. Cold formed normalized at 940°C max. Holding time 10'. Visual dimensional check: Satisfactory CF: FORMADO EN FRIO/COLD FORMED
Gerente de Aseguramiento de Calidad: Quality Assurance Manager:	
 ING. JOSE MARTINEZ MACIAS	
CC-008	