

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

Vendido a: **PIESA ANAHUAC** Pedido del Cliente No: **100000399** Lista de Empaque: **6913** Fecha/Date: **30 de Julio de 2004**

SoId to: **PIESA ANAHUAC** Customers Order No: **100000399** Packing List: **6913** Factura/invoice: **Bocas / Ends**

Especificaciones y Grados / Standard or Specification and Steel Grade **ASME B 16.9 and ASME B 16.28 edition 2001**  
 Seamless Fittings according to ASTM/ASME ASA 234 WPC - NACE MR **ASME B 16.9 and ASME B 16.28 edition 2001**  
 Dimensiones y tolerancias / Dimension and tolerances **ASME B 16.9 and ASME B 16.28 edition 2001**

ART. ITEM	COLADA HEAT CODE	CANTIDAD QUANTITY	DESCRIPCION / DESCRIPTION	PRUEBAS MECANICAS / MECHANICAL TEST				PRUEBA DE IMPACTO 0°C / IMPACT TEST 0°C			
				ESF. CEDENCIA YIELD STRENGTH (Mpa)	ESF. RUPRTURA TENSILE STRENGTH (Mpa)	ELONG. %2"	DUREZA HARDNESS HB	1 Joules	2 Joules	3 Joules	PROMEDIO AVERAGE Joules
1	SIS6	25	ELLS 4" X 90° L.R. SCH-XH.	311	489	51	147				
2	TJ66	13	ELLS 6" X 90° L.R. SCH-STD.	351	505	42	139				
3	TIY6	175	ELLS 6" X 90° L.R. SCH-STD.	320	472	42	139				
4	THS6	27	TEE 10" SCH-STD.	338	514	45	139				
5	TGW6	36	TEE 8" SCH-STD.	319	476	44	141				
6	TIID6	12	TEE 8" SCH-STD.	314	480	43	141				
7	TGW6	16	RED. TEE 8" X 6" SCH-STD.	319	476	44	141				
8	TEX6	36	ELLS 10" X 45° SCH-STD.	329	496	33	106				

PROCESO PROCESS	COLADA HEAT CODE	COLADA/HEAT M.P./MOTHER PIPE	ANALISIS QUIMICO / CHEMICAL ANALYSIS											
			%C.E.	%C	%Mn	%P	%S	%SI	%Cr	%Cu	%Mo	%Ni	%V	%Nb
HF	SIS6	31740	0.327	0.180	0.760	0.013	0.002	0.310	0.040	0.055	0.020	0.061	0.001	0.001
HF	TJ66	17649	0.342	0.180	0.830	0.015	0.003	0.280	0.040	0.078	0.042	0.030	0.000	0.000
HF	TIY6	17195	0.304	0.170	0.670	0.011	0.002	0.280	0.040	0.081	0.033	0.030	0.000	0.000
CF	THS6	15511	0.347	0.190	0.790	0.008	0.003	0.010	0.050	0.087	0.032	0.050	0.000	0.000
CF	TGW6	16532	0.318	0.180	0.660	0.007	0.004	0.270	0.060	0.086	0.038	0.040	0.000	0.000
CF	TIID6	16533	0.330	0.190	0.660	0.009	0.004	0.280	0.060	0.080	0.052	0.040	0.000	0.000
CF	TGW6	16532	0.318	0.180	0.660	0.007	0.004	0.270	0.060	0.086	0.038	0.040	0.000	0.000
HF	TEX6	15953	0.314	0.180	0.670	0.009	0.002	0.260	0.060	0.093	0.002	0.050	0.000	0.000

**PRUEBAS MECANICAS / MECHANICAL TEST**  
 Dimensiones Sample DIM mm: 1, 2, 3, AVERAGE  
 Material certs N°: 201063, 04016155, 04015438, 04009399, 04009594, 04009310, 04009594, 04006725

**PRUEBA DE IMPACTO 0°C / IMPACT TEST 0°C**  
 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.

**Notes:**  
 Formado en caliente a 780°C-840°C, enfriado al aire.  
 Hot formed in range from 780°C to 840°C, cooled in air.  
 Formado en frío normalizado a 840°C máx.  
 Cold formed normalized at 840°C max.  
 Tiempo de permanencia 10'.  
 Holding time 10'.  
 Inspección Dimensional: Satisfactoria.  
 Visual dimensional check: Satisfactory.  
 HE FORMADO EN CALIENTE/HOT FORMED  
 CF FORMADO EN FRIO/COLD FORMED

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

CC-008