



Tubos de Acero de Mexico, S.A.
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CERTIFICADO DE CALIDAD
INSPECTION CERTIFICATE
 (DIN EN 10204 3.1.B - ISO 10474 3.1.B)

Vendido a: **PIESA ANAHUAC** Pedido del Cliente No: **1193** Fecha/Date: **31 de Marzo de 2006**
 Sold to: **PIESA ANAHUAC** Customers Order No: **1193** Listado de Empaque: **8119** Factura/Invoice: **Bocas / Ends**
 Especificaciones y Grados / Standard or Specification and Steel Grade: **ASME B 16.9 and ASME B 16.28 edition 2001** Dimensiones y tolerancias / Dimension and tolerances: **Biselado / Bevelled ends**
 Seamless Fittings according to ASTM A 234-97, A234-02 / ASME AISA 234 WPB. **ASME B 16.9 and ASME B 16.28 edition 2001**
 NACE MR C-1:75-2003 - Corrosion to ASME II Ed. 2001

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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. RUPATURA TENSILE STRENGTH (Mpa)	ELONG %2"	DUREZA HARDNESS HB	DIMENSIONES SAMPLE DIM mm	1 Joules	2 Joules	3 Joules
1	BR3	34	ELLS 10 X 45 SCH-20	435	573	38	136				
2	GD4	12	ELLS 12 X 45 SCH-20	49462	71690	29	120				
3	S33990	25	ELLS 2 1/2 X 90 S.R. SCH-XH	344	487	51	136				
4	J05	10	ELLS 2 X 90 S.R. SCH-XH	290	453	32	127				
5	S39564	50	ELLS 3 X 90 L.R. SCH-XH	455	585	36	133				
6	S60750	50	ELLS 4 X 90 L.R. SCH-XH	333	493	50	148				
7	T22409	15	ELLS 5 X 90 L.R. SCH-XH	256	462	44	120				
8	T25705	10	RED. TEE 10 X 8 SCH-STD	327	490	40	124				

PROCESO PROCESS	COLADA HEAT CODE	COLADA/HEAT M.P.MOTHER PIPE	ANALISIS QUIMICO / CHEMICAL ANALYSIS											
			%C	%Mn	%P	%S	%SI	%Cr	%Cu	%Mo	%Ni	%V	%Nb	
HF	BR3	79446	0.310	0.181	0.700	0.004	0.004	0.280	0.020	0.069	0.011	0.030	0.000	0.000
HF	GD4	87962	0.309	0.186	0.596	0.001	0.002	0.327	0.040	0.146	0.013	0.047	0.002	0.000
HF	S33990	33990	0.314	0.180	0.720	0.012	0.001	0.300	0.030	0.037	0.020	0.019	0.001	0.001
HF	J05	21978	0.292	0.170	0.650	0.009	0.001	0.250	0.020	0.050	0.020	0.030	0.001	0.001
HF	S39564	39564	0.319	0.180	0.740	0.011	0.003	0.320	0.040	0.030	0.020	0.020	0.002	0.001
HF	S60750	60750	0.321	0.170	0.760	0.011	0.003	0.280	0.050	0.070	0.030	0.042	0.002	0.001
HF	T22409	22409	0.299	0.170	0.670	0.007	0.000	0.220	0.040	0.054	0.018	0.030	0.000	0.000
HF	T25705	25705	0.331	0.180	0.770	0.012	0.003	0.270	0.060	0.075	0.015	0.040	0.000	0.000

Notas: **Hot formed fittings in a range from 700°C to 940°C, cooled in still air.**
 Formado en caliente a 700°C-940°C, enfriado al
 aire. Formado en frío normalizado a 940°C max.
 Cod formed normalized at 940°C max.
 Tiempo de permanencia 10' Holding time 10'
 Inspección Dimensional Satisfactoria. Visual dimension/measure Satisfactory.
 HF FORMADO EN CALIENTE/ HOT FORMED CR FORMADO EN FRIJO/ COLD FORMED

Certificamos que los resultados de los Analisis Quimicos y Pruebas Mecanicas son verdaderos o una copia fiel de los certificados enviados por el Fabricante. Yo el proveedor de Materia Prima conforme ASTM A106/Grado B con N° material certifica conforme a ASTM A106 Grade B N° 99001221 218549 152465 266490 207939 05010781 05028713

The Products described herein were produced in accordance with the above referenced specification and are identified with the "R" which is permanently marked on each fitting.

Jefe de Aseguramiento de Calidad: **ING. JOSE MARTINEZ MACIAS**
 Quality Assurance Coordinator

CC-008