



Tubos de Acero de México, S.A.
 Carr. Mty-Laredo Km 24.2
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**CERTIFICADO DE CALIDAD
 INSPECTION CERTIFICATE**
 (DIN EN 10204 3.1 B - ISO 10474 3.1 B)

Envío a: **PIESA ANAHUAC**
 Sold to:
 Especificaciones y Grados / Standard or Specification and Steel Grade
 Seamless fittings according to ASTM A 234-97, A234-02 / ASME A54 234 WPB -
 NACE MR 01.75-2003 - Conform to ASME II Ed. 2001

Pedido del Cliente No: 1705 - 1653 - 1705 - 1718 - 1705 - 1604 -
 Customers Order No: 1653 - 1705

Lista de Empaque:
 Packing List

Factura/Invoice:
 Bocas / Ends
 Biselado / Bevelled ends

Fecha/Date:
 3 de Agosto de 2006

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. RUPURA TENSILE STRENGTH (Mpa)	ELONG. %2"	DUREZA HARDNESS HB	DIMENSIONES SAMPLE DIM mm	1 Joules	2 Joules	3 Joules	PROMEDIO AVERAGE Joules
1	S32536	20	ELIS 3" X 45" SCH-XH	327	488	50	123					
2	T28738	40	ELIS 4" X 45" SCH-STD	379	507	44	124					
3	T29389	40	ELIS 6" X 90" I. R. SCH-XH	322	480	42	126					
4	S43742	66	ELIS 3" X 90" I. R. SCH-STD	367	565	30	102					
5	S43741	198	ELIS 3" X 90" I. R. SCH-STD	337	520	35	116					
6	T22409	8	ELIS 5" X 45" SCH-XH	304	452	44	116					
7	T29417	20	CONC. RED. 12" X 10" SCH-STD	318	476	46	124					
8	T26620	5	ELIS 8" X 45" SCH-XH	302	470	45	118					
9	T27420	5	ELIS 8" X 45" SCH-XH	298	481	46	119					
10	T29389	35	ELIS 6" X 45" SCH-XH	322	480	42	126					
11	S41655	30	ELIS 4" X 90" S R. SCH-STD	317	478	41	114					

ANALISIS QUIMICO / CHEMICAL ANALYSIS

PROCESO PROCESS	COLADA HEAT CODE	COLADA/HEAT M P MOTHER PIPE	%C	%E	%Mn	%P	%S	%SI	%Cr	%Cu	%Mo	%Ni	%V	%Nb
HF	S32536		0.338	0.190	0.820	0.009	0.001	0.300	0.020	0.031	0.020	0.018	0.001	0.000
HF	T28738		0.300	0.170	0.670	0.009	0.002	0.300	0.040	0.077	0.022	0.030	0.000	0.000
HF	T29389		0.305	0.170	0.690	0.001	0.007	0.290	0.040	0.054	0.032	0.030	0.000	0.000
HF	S43742		0.320	0.180	0.750	0.011	0.002	0.300	0.030	0.048	0.020	0.026	0.001	0.000
HF	S43741		0.337	0.190	0.760	0.015	0.002	0.300	0.040	0.060	0.030	0.035	0.002	0.000
HF	T22409		0.300	0.170	0.670	0.007	0.000	0.270	0.040	0.054	0.017	0.030	0.000	0.000
CF	T29417		0.303	0.170	0.670	0.000	0.008	0.260	0.040	0.072	0.032	0.030	0.000	0.000
HF	T26620		0.300	0.170	0.680	0.007	0.002	0.280	0.030	0.026	0.026	0.030	0.000	0.000
HF	T27420		0.320	0.180	0.690	0.012	0.003	0.280	0.070	0.075	0.029	0.040	0.000	0.000
HF	T29389		0.305	0.170	0.690	0.001	0.007	0.290	0.040	0.054	0.032	0.030	0.000	0.000
HF	S41655		0.303	0.170	0.720	0.008	0.001	0.270	0.020	0.065	0.010	0.030	0.001	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 conforme ASTM A106/Grades B 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 conform to ASTM A106 Grade B N°:
 207922 6014457 6021564 306116 304324 5013693
 6021045 6013901 6006669 6021564 287360

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.

Notas:
 Formado en caliente a 790°C-840°C, enfriado al aire.
 Hot formed fittings in a range from 790°C to 840°C, cooled in still air.
 Site: Formado en frio normalizado a 840°C max.
 Cold formed normalized at 840°C max.
 Tiempo de permanencia 10'
 Holding time 10'
 Inspección Dimensional Satisfactoria
 Visual dimensional check: Satisfactory
 Formado EN CALIENTE/HOT FORMED
 Formado EN FRIO/COLD FORMED

Jefe de Aseguramiento de Calidad:
 Quality Assurance Coordinator
 ING. JOSE MARTINEZ MACIAS
 CC-008