

Tubos de Acero de México, S.A.
 Carr. Amty-Laredo Km 24.2
 Apartado Postal 43
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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:	1718	Lista de Empaque:	8 400	Fecha/Date:	1 de Agosto de 2006
Sold to:	PIESA ANAHUAC	Customers Order No:	1718	Packing List:			
Especificaciones y Grados / Standard or Specification and Steel Grade	Seamless Fittings according to ASTM A 234-97, A234-04 / ASME A5SA 234 WPB -						
NACE MR 01.75-2003 - Conform to ASME II Ed. 2001	ASME B 16.9-01 and ASME B 16.28 edition 1994						

ART ITEM	COLADA HEAT CODE	CANTIDA 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	PROMEDIO AVERAGE Joules	
1	T27925	10	CODO 10 X 90 RL STD	329	487	45	113						
2	T29031	40	CODO 10 X 90 RL STD	310	470	41	105						
3	T22549	1	CODO 14 X 45 STD	339	490	36	112						
4	T26966	5	CODO 14 X 45 STD	280	484	34	116						
5	T27434	3	CODO 14 X 45 STD	347	485	32	119						
6	T27405	5	CODO 16 X 45 XS	320	441	48	98						
7	S43741	456	CODO 4 X 90 RL STD	337	520	35	116						

PROCESO PROCESS	COLADA HEAT CODE	COLADA/HEAT M.P./MOTHER PIPE	ANALISIS QUIMICO / CHEMICAL ANALYSIS											
			%C	%E	%Mn	%P	%S	%Si	%Cr	%Cu	%Mo	%Ni	%V	%Nb
HF	T27925	27925	0.314	0.170	0.670	0.016	0.002	0.290	0.080	0.093	0.032	0.060	0.000	0.000
HF	T29031	29031	0.297	0.160	0.670	0.009	0.001	0.280	0.050	0.078	0.038	0.040	0.000	0.000
HF	T22549	22549	0.319	0.180	0.690	0.010	0.001	0.270	0.060	0.063	0.028	0.040	0.000	0.000
HF	T26966	26966	0.343	0.180	0.810	0.009	0.004	0.300	0.060	0.092	0.035	0.050	0.000	0.000
HF	T27434	27434	0.297	0.160	0.670	0.009	0.002	0.260	0.060	0.076	0.026	0.040	0.000	0.000
HF	T27405	27405	0.305	0.170	0.670	0.011	0.001	0.280	0.050	0.075	0.030	0.030	0.000	0.000
HF	S43741	43741	0.337	0.190	0.760	0.015	0.002	0.300	0.040	0.060	0.030	0.035	0.002	0.001

Notas:
 Formado en caliente a 780°C-840°C, enfriado al aire; Formado en frío normalizado a 840°C máx.
 Tiempo de perforación 10'
 Inspección Dimensional Satisfactoria
 Visual dimensional check Satisfactory

Notas:
 Hot formed in a range from 780°C to 840°C, cooled in still air.
 Cold formed normalized at 840°C máx.
 Hdring time 10'
 Visual dimensional check Satisfactory

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.

El producto descrito herein were produced in accordance with the above referenced specification and are identified with the "R" which is permanently marked on each fitting.
 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:
 Quality Assurance Coordinator
 ING. JOSE MARTINEZ MACIAS
 CC-008