

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

Numero:
 Number: 16164
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Vendido a: **TUVANSA MEXICO**
 Sold to: **TUVANSA MEXICO**
 Especificaciones y Grados / Standard or Specification and Steel Grade
 Seamless Fittings according to ASTM A 234-97, A234-04 / ASME A/SA 234 WPB -
 NACE MR 01.75-2003 - Conform to ASME II Ed. 2001

Pedido del Cliente No:
 Customers Order No: **MEX000030-01/05**
 Lista de Empaque:
 Packing List: **8261**
 Fecha/Date: **9 de Junio de 2006**

Dimensiones y tolerancias / Dimension and tolerances
ASME B 16.9-01 and ASME B 16.28 edition 1994

Factura/Invoice:
 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 AVERAGE Joules
1	S26314	30	ELLS 2 X 180 L.R. SCH-XH	333	480	40	125					
2	S38904	20	ELLS 4 X 180 S.R. SCH-XH	332	487	39	116					
3	S60750	50	ELLS 4 X 45 SCH-XH	333	493	50	148					
4	S43741	1994	ELLS 4 X 90 L.R. SCH-STD	337	520	35	116					
5	T24282	6	ELLS 4 X 90 L.R. SCH-STD	303	480	33	106					
6	T26676	4	CONC. RED. 12 X 6 SCH-STD	318	473	44	122					
7	T27406	16	CONC. RED. 12 X 6 SCH-STD	318	471	46	116					
8	T27030	5	CONC. RED. 14 X 8 SCH-STD	307	478	45	106					
9	T22751	3	CONC. RED. 14 X 8 SCH-XH	311	480	33	118					
10	T89364	1	CONC. RED. 14 X 8 SCH-XH	352	485	38	136					
11	T98665	1	CONC. RED. 14 X 8 SCH-XH	331	507	43	105					

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 (Tuberia) conforme ASTM A106GradeB 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 (Pipe) certs conform to ASTM A106 Grade B N°:
PROCESO PROCESS	COLADA HEAT CODE	COLADA/HEAT M.P./MOTHER PIPE	%C.E.	%C	%Mn	%P	%S	%Si	%Cr	%Cu	%Mo	%Ni	%v	%Nb	
HF	S26314	26314	0.309	0.120	1.030	0.010	0.001	0.250	0.030	0.090	0.010	0.040	0.001	0.001	
HF	S38904	38904	0.313	0.170	0.780	0.009	0.002	0.280	0.030	0.024	0.020	0.021	0.001	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	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	
HF	T24282	24282	0.301	0.170	0.660	0.008	0.001	0.280	0.050	0.060	0.027	0.030	0.000	0.000	
CF	T26676	26676	0.304	0.170	0.690	0.010	0.002	0.290	0.060	0.065	0.002	0.040	0.000	0.000	
CF	T27406	27406	0.302	0.170	0.680	0.009	0.001	0.260	0.040	0.064	0.021	0.030	0.000	0.000	
CF	T27030	27030	0.322	0.180	0.700	0.011	0.002	0.300	0.050	0.084	0.032	0.050	0.000	0.000	
CF	T22751	22751	0.328	0.180	0.680	0.015	0.002	0.270	0.090	0.077	0.043	0.040	0.000	0.000	
CF	T89364	89364	0.268	0.158	0.596	0.001	0.001	0.281	0.022	0.065	0.002	0.020	0.002	0.000	
CF	T98665	98665	0.315	0.180	0.670	0.011	0.004	0.300	0.050	0.064	0.045	0.003	0.000	0.000	

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

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

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