

CERTIFICADO DE CALIDAD
INSPECTION CERTIFICATE
 (DIN EN 10204:2004E - ISO 10474 3.1.B)

Numero:
 Number:
 21721

Pagina/Page:
 1 DE 1

Vendido a: Sold to:	PROVEEDORA DE MATERIALES ANKER, S.A. DE C.V.	Pedido del Cliente No: Customers Order No:	5275 - 5311 - 5308 - 5313	Lista de Empaque: Packing List:	11090	Fecha/Date: 2 de Diciembre de 2008
Especificaciones y Grados / Standard or Specification and Steel Grade Seamless Fittings according to ASTM A 234 "M" WPB-07, A234 "M" WPB-06a, NACE MR 01.75-2003 Conform to ASME II Ed. 2001 ASME SA-234 "M", Grade WPB, NACE MR0103-2003		Dimensiones y tolerancias / Dimension and tolerances ASME B 16.9 - 2007 and ASME B 16.28 - 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	CANTIDAD QUANTITY	DESCRIPCION / DESCRIPTION	ESF. CEDENCIA YIELD STRENGTH (Mpa)	ESF. RUPTURA TENSILE STRENGTH (Mpa)	ELONG. %2"	DUREZA HARDNESS HBW	DIMENSIONES SAMPLE DIM mm	1 Joules	2 Joules	3 Joules	PROMEDIO AVERAGE Joules
1	T42081	100	CODO 6 X 90° R.I. CED-STD.	303	471	37	102					
2	T41645	12	CODO 14 X 90° R.I. CED-STD	309	476	46	122					
3	T37516	3	TEE 12 CED-STD	320	478	37	97					
4	T30860	6	TEE 12 CED-STD	321	484	39	92					
5	S29078	13	CODO 3 X 45° CED-STD	313	482	31	111					
6	S47791	1	CODO 3 X 45° CED-STD	336	488	34	121					
7	S22787	3	CODO 3 X 45° CED-STD	330	479	38	115					
8	S22312	2	CODO 3 X 45° CED-STD	356	491	38	114					
9	S24067	25	CODO 3 X 45° CED-STD	315	479	31	114					
10	S26551	3	CODO 3 X 45° CED-STD	334	485	29	111					
11	S27377	2	CODO 3 X 45° CED-STD	343	520	32	116					

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 (Tubería Sin Costura) conforme ASTM A106 Grado 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 (Seamless Pipe) certs conform to ASTM A106 Grade B N°: 8062389 8062574 8007254 7014012 440948 339273 386289 379360 405032 424210 428369
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	T42081	42081	0.300	0.170	0.690	0.010	0.001	0.260	0.050	0.056	0.013	0.030	0.000	0.000	
HF	T41645	41645	0.300	0.170	0.660	0.014	0.001	0.270	0.050	0.051	0.009	0.030	0.000	0.000	
HF	T37516	37516	0.310	0.180	0.660	0.010	0.002	0.280	0.040	0.052	0.020	0.040	0.000	0.000	
HF	T30860	30860	0.320	0.180	0.690	0.010	0.002	0.300	0.060	0.048	0.025	0.030	0.000	0.000	
HF	S29078	29078	0.320	0.190	0.710	0.010	0.002	0.260	0.040	0.035	0.010	0.017	0.001	0.000	
HF	S47791	47791	0.330	0.190	0.750	0.010	0.001	0.300	0.050	0.033	0.030	0.018	0.001	0.001	
HF	S22787	22787	0.310	0.180	0.730	0.010	0.002	0.280	0.030	0.025	0.010	0.015	0.001	0.001	
HF	S22312	22312	0.320	0.190	0.740	0.010	0.001	0.290	0.030	0.019	0.010	0.010	0.001	0.001	
HF	S24067	24067	0.340	0.190	0.760	0.011	0.001	0.280	0.060	0.061	0.040	0.055	0.001	0.000	
HF	S26551	26551	0.310	0.180	0.720	0.011	0.001	0.280	0.040	0.023	0.010	0.015	0.001	0.000	
HF	S27377	27377	0.350	0.200	0.790	0.017	0.000	0.270	0.040	0.034	0.010	0.033	0.001	0.002	

Notas: Formado en caliente a 620°C-980°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 620°C to 980°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 referenced specification and are identified with the "R" which is permanently marked on each fitting. The values of hardness for fittings NPS 2 1/2" and smaller ones obtain from the conversion of hardness Rockwell B to hardness Brinell HBW by means of table WILSON DESK CHART 60. Los valores de dureza para conexiones de NPS de 2 1/2" y menores, se obtienen de la conversión de dureza Rockwell B a dureza Brinell HBW mediante la tabla WILSON DESK CHART 60.
---	---	--

Quality Manager/Jefe de Calidad:
 ING. WALDO GALLEGOS GALVAN