

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

Número:
Number: 22646
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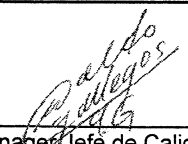
Vendido a: Sold to: PROVEEDORA DE MATERIALES ANKER, S.A. DE C.V.	Pedido del Cliente No: Customers Order No: 5443 - 5441	Lista de Empaque: Packing List: 11539	Fecha/Date: 22 de Julio de 2009
Especificaciones y Grados / Standard or Specification and Steel Grade Seamless Fittings according to ASTM A 234M WPB-07, NACE MR 01.75-2003 Conform to ASME II Ed. 2001 ASME SA-234M 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	S33571	105	CODO 3 X 90° R.L. CED-XS	296	473	32	130					
2	S21394	100	CODO 2 X 90° R.L. CED-STD	321	478	29	133					
3	T43329	8	CODO 10 X 90° R.L. CED-STD	3108	4745	41	118					
4	T43504	9	CODO 16 X 90° R.L. CED-STD	3235	4716	42	124					
5	T33298	1	TEE 10 CED-STD	341	496	33	86					
6	T40298	1	TEE 10 CED-STD	305	477	36	119					
7	T29077	1	TEE RED. 8 X 4 CED-STD	327	489	44	155					
8	T33435	1	TEE RED. 8 X 4 CED-STD	336	490	35	89					
9	T43376	8	TEE RED. 8 X 4 CED-STD	3294	4961	43	120					
10	T31643	1	TEE RED. 8 X 4 CED-XS	315	481	31	86					
11	T42699	9	TEE RED. 8 X 4 CED-XS	328	517	35	102					

ANALISIS QUIMICO / CHEMICAL ANALYSIS															Certificamos que los resultados de los Análisis Químicos y Pruebas Mecánicas 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°: 478915 371740 9036486 9024548 7018256 8062567 6023971 7049534 9022140 6045448 8068634 "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".
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	S33571	33571	0.330	0.200	0.710	0.008	0.003	0.300	0.030	0.026	0.010	0.002	0.001	0.000	
HF	S21394	21394	0.310	0.180	0.720	0.011	0.001	0.260	0.030	0.035	0.010	0.021	0.001	0.001	
HF	T43329	43329	0.310	0.180	0.670	0.012	0.001	0.290	0.040	0.043	0.017	0.020	0.000	0.000	
HF	T43504	43504	0.000	0.180	0.680	0.010	0.003	0.300	0.060	0.074	0.014	0.030	0.000	0.000	
HF	T33298	33298	0.320	0.180	0.670	0.019	0.004	0.280	0.080	0.056	0.028	0.030	0.000	0.000	
HF	T40298	40298	0.320	0.190	0.670	0.007	0.003	0.280	0.050	0.079	0.023	0.040	0.000	0.000	
HF	T29077	29077	0.310	0.170	0.680	0.008	0.001	0.270	0.050	0.074	0.038	0.040	0.000	0.000	
HF	T33435	33435	0.310	0.180	0.680	0.010	0.001	0.270	0.040	0.058	0.031	0.030	0.000	0.000	
HF	T43376	43376	0.300	0.170	0.690	0.015	0.004	0.280	0.040	0.062	0.013	0.030	0.000	0.000	
HF	T31643	31643	0.330	0.180	0.730	0.009	0.002	0.280	0.070	0.086	0.040	0.030	0.000	0.000	
HF	T42699	42699	0.340	0.180	0.830	0.018	0.002	0.320	0.040	0.067	0.024	0.030	0.000	0.000	

Notas:
Formado en caliente a 620°C-980°C, enfriado al aire; Formado en frío 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


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

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.