

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

Número:
Number:

24410

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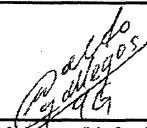
Vendido a: Sold to:	PROVEEDORA DE MATERIALES AN CER, S. A. DE C. V.	Pedido del Cliente No: Customers Order No:	5960 - 5962 -	Lista de Empaque: Packing List:	12563	Fecha/Date:	11 de Marzo de 2011
Especificaciones y Grados / Standard or Specification and Steel Grade Seamless Fittings according to ASTM A 234 WPB-07, NACE MR 01.75-2003 Conform to ASME II Ed. 2001 ASME SA-234, 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 / Beveled 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	T52744	72	CODO 6 X 45° CED-XS	331	497	41	122					
2	T53005	500	CODO 6 X 45° CED-STD	324	489	40	126					
3	T51816	100	CODO 8 X 45° CED-STD	327	494	39	96					
4	S31051	3	CODO 3 X 90° R.C. CED-XS	297	473	33	133					
5	S42895	20	CODO 2 X 90° R.C. CED-XS	313	478	30	137					

ANALISIS QUIMICO / CHEMICAL ANALYSIS														
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	T52744	52744	0.340	0.190	0.770	0.010	0.000	0.300	0.040	0.067	0.035	0.040	0.000	0.000
HF	T53005	53005	0.310	0.180	0.680	0.009	0.001	0.270	0.050	0.060	0.016	0.030	0.000	0.000
HF	T51816	51816	0.320	0.180	0.720	0.009	0.002	0.310	0.060	0.069	0.027	0.040	0.000	0.000
HF	S31051	31051	0.340	0.200	0.750	0.008	0.001	0.280	0.030	0.030	0.010	0.021	0.001	0.000
HF	S42895	42895	0.320	0.180	0.760	0.013	0.002	0.300	0.050	0.017	0.010	0.014	0.004	0.002

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°: 11001297 11004287 10049502 457123 10058587

"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 620°C-980°C, enfriado en 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.
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