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CERTIFICADO DE CALIDAD INSPECTION CERTIFICATE (DIN EN 10204:2004E - ISO 10474 3.1.B)		Numero: Number: 24577	Pagina/Page: 1 DE 1
Vendido a: Sold to: PROVEEDORA DE MATERIALES ANGER, S.A. DE C.V.	Pedido del Cliente No: Customers Order No: 5960	Lista de Empaque: Packing List: 12662	Fecha/Date: 11 de Mayo 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 / 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	T51525	12	CODO 16 X 90° R L CED-XS	310	522	47	118					
2	T47708	27	RED. CONC. 8 X 4 CED-STD	309	473	41	108					
3	T51308	2	CODO 14 X 45° CED-STD	278	477	34	103					
4	T51306	4	CODO 14 X 45° CED-STD	313	488	42	122					
5	T52308	14	RED. CONC. 6 X 5 CED-STD	315	484	42	122					
6	T50768	32	CODO 16 X 45° CED-XS	315	480	44	122					
7	T37883	30	RED. CONC. 12 X 10 CED-XS	306	489	30	113					
8	S29506	40	CODO 8 X 90° R C. CED-STD	306	474	32	126					
9	T50526	1	TEE RED. 8 X 4 CED-XS	318	487	43	120					

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	T51525	51525	0.300	0.170	0.690	0.014	0.002	0.280	0.040	0.063	0.016	0.030	0.000	0.000
CF	T47708	47708	0.300	0.170	0.680	0.012	0.002	0.300	0.040	0.072	0.015	0.030	0.000	0.000
HF	T51308	51308	0.310	0.180	0.650	0.014	0.001	0.280	0.050	0.053	0.023	0.030	0.000	0.000
HF	T51306	51306	0.310	0.180	0.660	0.011	0.001	0.260	0.040	0.050	0.022	0.030	0.000	0.000
CF	T52308	52308	0.310	0.180	0.690	0.012	0.001	0.280	0.030	0.063	0.023	0.030	0.000	0.000
HF	T50768	50768	0.310	0.180	0.660	0.012	0.001	0.280	0.050	0.044	0.018	0.020	0.000	0.000
CF	T37883	37883	0.340	0.190	0.780	0.011	0.002	0.280	0.040	0.056	0.013	0.030	0.000	0.000
HF	S29506	29506	0.320	0.180	0.740	0.008	0.002	0.290	0.040	0.051	0.020	0.030	0.003	0.001
HF	T50526	50526	0.310	0.180	0.670	0.013	0.002	0.280	0.050	0.059	0.019	0.030	0.000	0.000

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°.

10050035 10018311 10041851 10041124 11012164 10053788
10056194 469441 10047127

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.

Notes: 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.
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