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CERTIFICADO DE CALIDAD INSPECTION CERTIFICATE (DIN EN 10204:2004E - ISO 10474 3.1.B)		Número: Number: 24357	Página/Page: 1 DE 1
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Vendido a: Sold to: PROVEEDORA DE MATERIALES ANGER, S.A. DE C.V.	Pedido del Cliente No: Customers Order No: 5945 - 5939	Lista de Empaque: Packing List: 1 25 24	Fecha/Date: 21 de Febrero 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	T52744	55	CODO 6 X 45° CED-XS	331	497	41	122					
2	S42235	15	CODO 4 X 45° CED-STD	300	473	35	135					
3	T52004	12	TEE RED. 8 X 6 CED-STD	312	487	44	120					
4	S31050	438	CODO 1 1/4 X 90° R.L. CED-STD	367	534	32	130					
5	S42236	10	CODO 4 X 180° R.L. CED-STD	323	489	32	108					
6	S32624	4	CODO 4 X 45° CED-XS	301	488	31	140					
7	S30232	50	CODO 4 X 45° CED-XS	295	483	30	135					
8	S42235	116	CODO 4 X 45° CED-XS	299	472	36	105					
9	T41950	2	TEE 12 CED-80	325	463	53	114					
10	T51311	20	CODO 12 X 90° R.L. CED-80	286	473	46	124					
11	S33021	78	CODO 3 X 180° R.L. CED-STD.	317	483	31	118					

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) certifies conform to ASTM A106 Grade B N°: 11001265 10053812 10060053 457348 10053805 470425 451016 10053801 9015607 10040931 473305 "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	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	S42235	42235	0.330	0.190	0.770	0.013	0.001	0.310	0.030	0.033	0.010	0.027	0.002	0.002	
HF	T52004	52004	0.320	0.180	0.680	0.015	0.002	0.290	0.060	0.054	0.024	0.040	0.000	0.000	
HF	S31050	31050	0.330	0.190	0.760	0.007	0.002	0.270	0.030	0.023	0.010	0.013	0.001	0.000	
HF	S42236	42236	0.330	0.190	0.760	0.011	0.001	0.290	0.040	0.031	0.020	0.035	0.002	0.002	
HF	S32624	32624	0.340	0.200	0.740	0.012	0.003	0.290	0.040	0.036	0.010	0.031	0.001	0.000	
HF	S30232	30232	0.330	0.190	0.770	0.015	0.001	0.250	0.050	0.003	0.010	0.010	0.001	0.001	
HF	S42235	42235	0.330	0.190	0.770	0.013	0.001	0.310	0.030	0.033	0.010	0.027	0.002	0.002	
HF	T41950	41950	0.300	0.170	0.660	0.007	0.002	0.260	0.050	0.040	0.020	0.030	0.000	0.000	
HF	T51311	51311	0.310	0.180	0.660	0.011	0.001	0.270	0.040	0.062	0.027	0.040	0.000	0.000	
HF	S33021	33021	0.310	0.180	0.720	0.014	0.001	0.290	0.030	0.044	0.010	0.024	0.001	0.000	

<p>Notes:</p> <p>Formado en caliente a 820°C-980°C, enfriado al aire; Formado en frío normalizado a 940°C max.</p> <p>Tiempo de permanencia 10'.</p> <p>Inspección Dimensional: Satisfactoria.</p> <p>HF: FORMADO EN CALIENTE-HOT FORMED</p>	<p>Notes:</p> <p>Hot formed fittings in a range from 820°C to 980°C, cooled in still air.</p> <p>Cold formed normalized at 940°C max.</p> <p>Holding time 10'.</p> <p>Visual dimensional check: Satisfactory.</p> <p>CF: FORMADO EN FRIO/COLD FORMED</p>	<p>Quality Manager/Jefe de Calidad: ING. WALDO GALLEGOS GALVAN</p>	<p>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.</p> <p>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.</p>
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