



Tubbs de Acero de México, S.A.
Carr. Mty-Laredo Km 24.2
Apartado Postal 43
(65550) C. de Flores, N.L. Méx.
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**CERTIFICADO DE CALIDAD
INSPECTION CERTIFICATE**
(DIN EN 10204:2004E - ISO 10474 3.1.B)

Número:
Number:
23533

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Vendido a:
Sold to: PLESA ANAHUAC Y CIA. S.A. DE C.V.

Pedido del Cliente No:
Customers Order No: 8141 - 8034

Lista de Empaque:
Packing List: 12028

Fecha/Date:
15 de Junio de 2010

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	S33021	10	CODO 4 X 45° CED-STD	325	501	35	142					
2	S32858	5	CODO 4 X 45° CED-STD	319	491	32	135					
3	S31760	1	CODO 4 X 45° CED-STD	262	445	30	112					
4	S30232	2	CODO 4 X 45° CED-STD	307	491	32	137					
5	S31761	4	CODO 4 X 45° CED-STD	305	479	32	111					
6	S28891	7	CODO 4 X 45° CED-STD	392	508	32	117					
7	T49220	16	RED. CONC. 8 X 6 CED-STD	282	473	44	118					
8	T47708	3	RED. CONC. 8 X 6 CED-STD	322	488	44	120					
9	T49521	20	CODO 8 X 45° CED-STD	343	511	39	120					
10	T49220	8	CODO 10 X 45° CED-STD	303	467	40	120					
11	T47708	4	CODO 10 X 45° CED-STD	317	485	40	120					

PLEASA ANAHUAC Y CIA. S.A. DE C.V.
CONTROL DE CALIDAD
FECHA: 16 Junio 2010
E991
FIRMA: E. RUIZ

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	S33021	33021	0.320	0.180	0.740	0.013	0.001	0.300	0.030	0.045	0.010	0.025	0.001	0.000
HF	S32858	32858	0.310	0.170	0.730	0.012	0.001	0.280	0.040	0.060	0.010	0.028	0.001	0.000
HF	S31760	31760	0.340	0.200	0.740	0.009	0.002	0.260	0.040	0.041	0.000	0.017	0.001	0.000
HF	S30232	30232	0.350	0.200	0.780	0.014	0.001	0.270	0.050	0.049	0.010	0.010	0.001	0.000
HF	S31761	31761	0.320	0.180	0.740	0.008	0.001	0.250	0.040	0.042	0.010	0.023	0.001	0.000
HF	S28891	28891	0.320	0.180	0.730	0.011	0.003	0.260	0.040	0.024	0.010	0.028	0.001	0.000
CF	T49220	49220	0.300	0.170	0.700	0.010	0.002	0.270	0.030	0.069	0.019	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	T49521	49521	0.290	0.170	0.670	0.015	0.003	0.270	0.010	0.049	0.019	0.020	0.000	0.000
HF	T49220	49220	0.300	0.170	0.670	0.011	0.003	0.280	0.030	0.066	0.020	0.030	0.000	0.000
HF	T47708	47708	0.300	0.170	0.670	0.012	0.002	0.300	0.040	0.078	0.014	0.030	0.000	0.000

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°: 473674 472674 462049 457227 462049 443255 10024414 10018311 10024974 10025863 10006118

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°: 473674 472674 462049 457227 462049 443255 10024414 10018311 10024974 10025863 10006118

"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 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.

CC-008