

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

Número:
Number:
23704

Página/Page:
1 DE 1

Tabbs de Acero de México, S.A.
Carr. Mty-Laredo Km 24.2
Apartado Postal 43
(65550) C. de Flores, N.L. Méx.
(52) 81 8305 9600 tel
(52) 81 8305 9620 fax

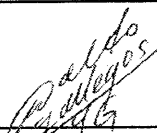
Vendido a: Sold to:	PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No:	8701	Lista de Empaque: Packing List:	12133	Fecha/Date:	13 de Agosto de 2010
Especificaciones y Grados / Standard or Specification and Steel Grade Seamless Fittings according to ASTM A 234M WPB-07, NACE MR 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	T41415	5	TEE RED. 10 X 8 CED-STD	335	487	35	98					
2	T49220	1	CODO 10 X 45° CED-STD	303	467	40	120					
3	T49654	14	CODO 10 X 45° CED-STD	306	480	41	120					
4	T49583	4	CODO 12 X 45° CED-STD	320	492	43	120					
5	T49582	6	CODO 12 X 45° CED-STD	321	500	42	120					
6	T46857	18	RED. CONC. 10 X 8 CED-XS	316	488	40	122					
7	T49259	30	RED. CONC. 10 X 6 CED-STD	329	490	42	122					
8	T41415	5	TEE RED. 10 X 6 CED-STD	318	495	33	124					
9	T48705	6	CODO 12 X 45° SHC-80	297	482	45	118					
10	T35601	2	CODO 12 X 45° CED-40	318	491	46	88					
11	T46857	4	CODO 12 X 45° CED-40	331	502	41	124					

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°: 8070076 10025863 10026151 10028872 10026154 10017089 10021561 9007743 10015259 7048512 9065515 "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	T41415	41415	0.310	0.170	0.780	0.009	0.001	0.270	0.030	0.046	0.004	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	T49654	49654	0.320	0.190	0.660	0.013	0.001	0.280	0.030	0.062	0.025	0.030	0.000	0.000	
HF	T49583	49583	0.310	0.190	0.650	0.017	0.005	0.290	0.020	0.057	0.024	0.030	0.000	0.000	
HF	T49582	49582	0.310	0.190	0.660	0.013	0.001	0.280	0.010	0.060	0.030	0.030	0.000	0.000	
CF	T46857	46857	0.310	0.180	0.660	0.011	0.003	0.300	0.040	0.077	0.029	0.040	0.000	0.000	
CF	T49259	49259	0.300	0.170	0.680	0.011	0.002	0.270	0.040	0.073	0.023	0.030	0.000	0.000	
HF	T41415	41415	0.320	0.190	0.740	0.009	0.002	0.300	0.020	0.047	0.010	0.020	0.000	0.000	
HF	T48705	48705	0.310	0.180	0.670	0.010	0.002	0.290	0.040	0.058	0.019	0.030	0.000	0.000	
HF	T35601	35601	0.310	0.170	0.680	0.010	0.001	0.290	0.060	0.072	0.034	0.030	0.000	0.000	
HF	T46857	46857	0.310	0.180	0.650	0.011	0.003	0.300	0.050	0.080	0.029	0.040	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.