

LAVISA, S.A. DE C.V.

ORDEN
PART. No. 1
REFERENCIA 36711



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

Número:
Number: 24415
Página/Page: 1 DE 1

Lista de Embarque de Materiales
Calle Miguel Alemán No. 2
P.O. Box 10000
1651000, C. de Flores, P.L. México
Tel: (52) 81 8205 0000 ext.
Fax: (52) 81 8205 0000 ext.

Vendido a: Sold to: Pedido del Cliente No.: 10085
Customers Order No.:
Especificaciones y Grados / Standard or Specification and Steel Grade: Seamless fittings according to ASTM A 234 WPB-07, NACE MR 01-70-2003
Dimensions and tolerancias / Dimension and tolerances: ASME B 16.9 - 2007 and ASME B 16.28 - 1994
Lista de Empaque: 12565 Packing List
Fecha/Date: 14 de Marzo de 2011
Factura/Invoice: Bocas / Ends Bevelado / 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
12	T50390	44	RED. CONC. 8 X 4 CED-YS	314	488	44	128					
13	T41415	11	RED. CONC. 12 X 18 CED-YS	336	487	35	98					
14	T51071	10	RED. CONC. 14 X 12 CED-YS	308	495	48	124					
15	S26168	58	CODO 2 1/2 X 90° R.L. CED-YS	264	472	37	125					
16	S22920	70	RED. CONC. 4 X 2 1/2 CED-STD	292	467	35	125					
17	S29078	170	CODO 4 X 45° CED-YS	344	523	34	136					
18	S22624	42	CODO 4 X 45° CED-YS	301	488	31	240					
19	T46857	14	RED. CONC. 10 X 5 CED-STD	327	493	41	134					
20	T37043	9	TEE 14 CED-YS	302	470	36	90					
21	T49269	9	RED. CONC. 12 X 6 CED-YS	317	486	44	120					
22	T41415	2	RED. CONC. 12 X 8 CED-YS	335	487	35	98					

ANALISIS QUIMICO / CHEMICAL ANALYSIS															
PROCESO PROCESS	COLADA HEAT CODE	COLADA/HEAT M.P./MOTHER PIPE	%C	%Mn	%P	%S	%Si	%Cr	%Cu	%Mo	%Ni	%V	%Nb	%Ti	%N
CF	T50390	50390	0.220	0.180	0.011	0.001	0.280	0.060	0.063	0.023	0.030	0.000	0.000	0.000	0.000
CF	T41415	41415	0.240	0.170	0.009	0.001	0.270	0.030	0.046	0.004	0.020	0.000	0.000	0.000	0.000
CF	T51071	51071	0.330	0.190	0.075	0.012	0.002	0.290	0.060	0.075	0.022	0.040	0.000	0.000	0.000
CF	S26168	26168	0.325	0.180	0.010	0.008	0.001	0.290	0.020	0.038	0.020	0.013	0.001	0.001	0.001
CF	S22920	22920	0.310	0.180	0.010	0.011	0.002	0.280	0.038	0.033	0.030	0.001	0.001	0.001	0.001
CF	S29078	29078	0.310	0.180	0.010	0.009	0.001	0.270	0.038	0.038	0.030	0.001	0.001	0.001	0.001
CF	S22624	22624	0.340	0.200	0.012	0.003	0.290	0.040	0.036	0.020	0.031	0.001	0.001	0.001	0.001
CF	T46857	46857	0.210	0.130	0.008	0.012	0.004	0.290	0.050	0.080	0.020	0.060	0.000	0.000	0.000
CF	T37043	37043	0.290	0.150	0.010	0.012	0.001	0.300	0.040	0.085	0.016	0.030	0.000	0.000	0.000
CF	T49269	49269	0.210	0.180	0.010	0.001	0.300	0.020	0.060	0.030	0.035	0.000	0.000	0.000	0.000
CF	T41415	41415	0.310	0.170	0.008	0.001	0.270	0.030	0.046	0.004	0.022	0.000	0.000	0.000	0.000

Confirmamos que los resultados de los Análisis Químicos y Pruebas Mecánicas son verdaderos e uno copia fiel de los certificados enviados por el Fabricante y/o el proveedor de Materiales Primos (Tubería Sin Costura) conforme ASTM A106 Grado B con SP.
We certify that results 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) conforms to ASTM A106 Grade B NP.
10049569 0052384 10049760 165877 246722 443228 470620 2061204 9315916 10027096 5062384
Este material cumple con los requerimientos especificados en la orden.
The material of this certificate fulfil number mentioned above is in compliance with the requirements specified in the order.

Formado en caliente a 820°C/850°C, enfriado en aire.
Hot formed fittings in a range from 820°C to 850°C, cooled in air.
Formado en frío normalizado a 600°C máx.
Cold formed normalized at 600°C máx.
Tiempo de permanencia en H.
Holding time 10.
Inspección Dimensional Sanitización
Visual dimension check Sanitization
HT FORMADO EN CALIENTE/HT FORMED
D FORMADO EN FRIJO/ D FORMED

Quality Manager / Jefe de Calidad:
ING WALDO GALLEGOS GALVAN

The Products described herein were produced in accordance with the above referenced specification and standards with the "R" which is permanently embossed on each fitting. The values of hardness for fittings NPS 2 1/2" and smaller only obtain from the conversion of hardness Rockwell B to hardness Brinell HBW by means of table WILSON DESK CHART 63.
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 63.