

LAVISIA, S.A. DE C.V.

ORDEN

PART. No. 1

REFERENCIA 36711

**Tenaris**

Tubos de Acero de México, S.A.  
Carr. Atlix-Laredo Km. 24.2  
Apartmento Postal 43  
(85550), Y. de Hueres, N.L. Méx.  
(52) 81 8305 9600 tel  
(52) 81 8305 9520 fax

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

Numero:  
Number:

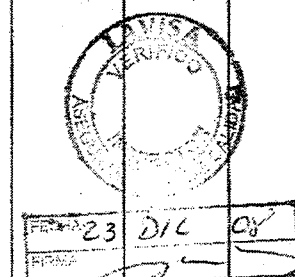
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Vendido a: Sold to:	Pedido del Cliente No: Customers Order No:	Lista de Empaque: Packing List:	Fecha/Date:
	4157 -	10769	28 de Agosto de 2008
Especificaciones y Grados / Standard or Specification and Steel Grade Seamless Fittings according to ASTM A 234 "M" WPB-97, A234 "M" WPB-06a, NACE MR 01.75-2003 Conform to ASME II Ed. 2001 ASME SA-234 "M", Grade WPB, NACE MR0103-2003		Dimensiones y tolerancias / Dimension and tolerances ASME B 16.9 - 2003 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. %Z"	DUREZA HARDNESS HBW	DIMENSIONES SAMPLE DIM mm	1 Joules	2 Joules	3 Joules	PROMEDIO AVERAGE Joules
12	S38130	150	CODO 1 1/2 X 90° R.L. CED-XS	358	524	34	130					
13	T27435	16	TEE RED 8 X 6 CED-XS	262	460	37	103					
14	T38541	4	TEE RED 8 X 6 CED-XS	262	471	32	120					
15	S48307	100	CODO 3 X 90° R.C. CED-STH	284	475	33	125					
16	S20540	100	CODO 4 X 45° CED-XS	309	486	37	106					
17	S37410	20	CODO 5 X 45° CED-XS	335	476	40	139					
18	T39508	15	CODO 6 X 90° R.L. CED-2U	322	491	39	116					



ANALISIS QUIMICO / CHEMICAL ANALYSIS															Certificamos que los resultados de los Analisis Químicos y Pruebas Mecánicas son verdaderos o una copia fiel de los certificados enviados por el Fabricante y/o el proveedor de Materia Prima (Tuberia Sin Costura) conforme ASTM A106 Grade 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) cuts conform to ASTM A106 Grade B N°: 258860 6036124 8043634 244862 365216 257541 8033813  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	S38130	38130	0.313	0.180	0.710	0.009	0.001	0.280	0.030	0.043	0.020	0.022	0.001	0.001	
HF	T27435	27435	0.320	0.180	0.670	0.010	0.003	0.290	0.060	0.075	0.038	0.030	0.000	0.000	
HF	T38541	38541	0.306	0.170	0.670	0.007	0.002	0.290	0.050	0.073	0.014	0.040	0.000	0.000	
HF	S48307	48307	0.320	0.180	0.720	0.010	0.001	0.250	0.040	0.029	0.020	0.036	0.001	0.001	
HF	S20540	20540	0.320	0.180	0.770	0.013	0.001	0.280	0.050	0.038	0.010	0.022	0.001	0.001	
HF	S37410	37410	0.306	0.170	0.720	0.014	0.001	0.290	0.040	0.036	0.030	0.018	0.001	0.001	
HF	T39508	39508	0.306	0.170	0.680	0.012	0.002	0.280	0.060	0.049	0.017	0.030	0.000	0.000	

Notes: Hot formed fittings in a range from 920°C to 950°C, cooled in still air.  
Hot formed fittings in a range from 920°C to 950°C, cooled in still air.  
Cold formed certified to 940°C max.  
Cold formed certified to 940°C max.  
Holding time 10'.  
Holding time 10'.  
Inspección Dimensional: Satisfactoria.  
Visual dimensional check: Satisfactory

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.

Quality Manager/Jefe de Calidad:  
ING. WALDO GALLEGOS GALVAN