



**MILL TEST REPORT**

**PRODUCT:** 1 1-2 X 1 1-2 VERDE ASTM A-500-A / NMX B-199  
**FINISHING:** PERFIL ESTRUCTURAL RECTANGULAR (PERT)

**CUSTOMER:** CS ESPUELA

**SHIPPING DATE:** 19/09/12

**TRANSPORT PLATFORM:**

**S.T.V.**

**INVOICE:** 4763T

**ORDER:** N/A

**TRANSPORT/ TRANSPORTE:**

**MANUFACTURER/ PLANTA :** LAMINA Y PLACA COMERCIAL S.A DE C.V.  
 DIEGO DIAZ DE BERLANGA, NO. 1002 SUR  
 SAN NICOLAS DE LOS GARZA, NUEVO LEON, MEXICO

I HEREBY CERTIFY THAT THE PRODUCT ACCOMPLISHED WITH THE SPECIFICATION TO THE INVOICE AND/ OR REMISSION ( DATABASE OF SYSTEM ).  
 ESTE PRODUCTO FUE FABRICADO BAJO LA NORMA QUE SE DESCRIBE HACIENDO CUMPLIR LOS REQUERIMIENTOS DE LA ESPECIFICACION (BASE DE DATOS DEL SISTEMA).

**PROCESS:** HFW

MANUFACTURING INFORMATION/ INFORMACION DE MANUFACTURA							DIMENSIONS (DIMENSIONES)		
DATE	SHIFT	OPER	ORDER OP #	GRADE	MANUFACT PROCESS	HEAT TREATMENT	OUTSIDE DIAMETER (In)	Thickness (In)	LENGT (Mts)
08/08/12	1	COM	344	A	HFW	NO	1.500"	.125"	6.00

ONLINE TESTS (PRUEBAS DE CAMPO)									
HEAT NUMBER (COLADA)	HYDROSTATIC TEST (PSI)	DELIVERY CONDITION	TIME (Sec.)	NON-DESTRUCTIVE TEST (PND)	METALLOGRAPHY TEST	BENDING TEST	FLATTENING TEST	VISUAL INSPECTION	
15398	1000	AS ROLLED	5	OK	OK	OK	OK	OK	

CHEMICAL ANALYSIS (ANALISIS QUIMICOS)/ MECHANICAL PROPERTIES (PROPIEDADES MECANICAS)									
HEAT NUMBER (COLADA)	%C	%Mn	%P	%S	%SI	%Cr	%Mo	%Ni	%Cu
15398	0.0860	0.4230	0.0090	0.0080	0.0000	0.0000	0.0000	0.0000	0.0000
%Nb	%Sn	%Ti	%V		YIELD ST (PSI)	UT (PSI)	% ELONG	HARDNESS (HRb)	CARBON EQUIVALENT %
0.0000	0.0000	0.0010	0.0000		52236	55082	23.6	74	N/A

CHARPY TEST (PRUEBA CHARPY)					
HEAT IDENT NUM	ABSORBED ENERGY (FT-LB)			AVERAGE	TEMPERATURE TEST °C
	1	2	3		
15398	N/A	N/A	N/A	N/A	N/A

**NOTE:** THE SUM OF THE NIOBIUM, VANADIUM AND TITANIUM CONCENTRATIONS SHALL BE 0.15%  
**NOTA:** LA SUMA DE LA CONCENTRACION DE NIOBIO, VANADIO Y TITANIO NO DEBE SER 0.15%

I HAVE PERSONAL KNOWLEDGE AS TO ACCURACY OF THE ABOVE INFORMATION, AND HAVE AUTHORITY TO SIGN ON BEHALF OF THE COMPANY.  
 TENGO EL CONOCIMIENTO Y AUTORIZACION EN NOMBRE DE LA COMPAÑIA PARA AVALAR ESTA INFORMACION.

**SINCERELY**

ING. DIONISIO CHIHUAHUA PEREZ

**QUALITY ASSURANCE MANAGER**