



MILL TEST REPORT

PRODUCT: 3X3 BLANCO ASTM A-500-A / NMX B-199
FINISHING: PERFIL ESTRUCTURAL RECTANGULAR (PERT)

CUSTOMER: CS ESPUELA

SHIPPING DATE: 28/09/12

TRANSPORT PLATFORM: MONTELONGO FLORES JOSE JOEL

INVOICE: 4804T

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)
18/09/12	1	COM	412	A	HFW	NO	3X3"	0.125"	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	
16280	1000	AS ROLLED	5	OK	OK	OK	OK	OK	

CHEMICAL ANALYSYS (ANALISIS QUIMICOS)/ MECHANICAL PROPERTIES (PROPIEDADES MECANICAS)									
HEAT NUMBER (COLADA)	%C	%Mn	%P	%S	%Si	%Cr	%Mo	%Ni	%Cu
16280	0.0700	0.0450	0.0050	0.0040	0.0100	0.0100	0.0000	0.0100	0.0200
%Nb	%Sn	%Ti	%V		YIELD ST (PSI)	UT (PSI)	% ELONG	HARDNESS (HRb)	CARBON EQUIVALENT %
0.0000	0.0000	0.0010	0.0000		44.789	57.1960	50.000	74	N/A

CHARPY TEST (PRUEBA CHARPY)					
HEAT IDENT NUM	ADSORBED ENERGY (FT-LB)			AVERAGE	TEMPERATURE TEST °C
	1	2	3		
16280	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