31134-2

VILLACERO

# MILL TEST REPORT

***PRODUCT:*** **1/2" C80 ASTM A-53-A / NMX B-177**

***FINISHING:*** **TUBO BARNIZADO EXTREMO LISO**

**CUSTOMER:** **BODEGA PYLSA**

**SHIPPING DATE:** **13/09/12**

**TRANSPORT PLATAFORM:** **TRANSPORTES METRA**

TRANSPORT/ TRANSPORTE:

**INVOICE:** **4745T**

**ORDER:** **N/A**

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 ACCOMPILSHED 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) |
| 09/08/12 | 1 | COM | 82 | A | HFW | NO | 0.840 | 0.179" | 6.40 |

| 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 |
| 122599 | 1000 | N | 5 | OK | OK | OK | OK | OK |

| HEAT NUMBER (COLADA) | %C | %Mn | %P | %S | %Si | %Cr | %Mo | %Ni | %Cu |
|---|---|---|---|---|---|---|---|---|---|
| 122599 | 0.0600 | 0.4500 | 0.0090 | 0.0040 | 0.0200 | 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 | 0.0000 | 0.0000 | | 55083 | 56079 | 29.900 | 74 | N/A |

| CHARPY TEST (PRUEBA CHARPY) | | | | | |
|---|---|---|---|---|---|
| HEAT IDENT NUM | ABSORBED ENERGY (FT-LB) | | | AVERAGE | TEMPERATURE TEST °C |
| | 1 | 2 | 3 | | |
| 122599 | N/A | N/A | N/A | N/A | N/A |

NOTE: THE SUM OF THE NIOBIUM, VANADIUM AND TITANIUM CONCENTRATIONS SHALL BE $\leq$ 0.15%
NOTA: LA SUMA DE LA CONCENTRACION DE NIOBIO, VANADIO Y TITANIO NO DEBE SER $\leq$ 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 COMPAÑÍA PARA AVALAR ESTA INFORMACIÓN.

**SINCERELY**

ING. DIONISIO CHIHUAHUA PEREZ

**QUALITY ASSURANCE MANAGER**