



### MILL TEST REPORT

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

FINISHING: TUBO BARNIZADO CON EXTREMO LISO (1 ATADO) (61 PZAS)

CUSTOMER: PLESA ANAHUAC Y CIAS S.A. DE C.V.

SHIPPING DATE: 20/08/20

INVOICE: FT-44843

PURCHASE ORDER: 1200359526

TRANSPORT/ TRANSPORTE: S.T.V.

MANUFACTURER/ PLANTA : LAMINA Y PLACA COMERCIAL S.A DE C.V.  
 RAW MATERIAL MAKER/FABRICANTE MATERIA PRIMA:AHMSA MÉXICO  
 DIEGO DIAZ DE BERLANGA, NO. 1002 SUR  
 SAN NICOLAS DE LOS GARZA, NUEVO LEON, MEXICO

THIS CERTIFICATE IS ISSUED ACCORDING TO EN 10204 3.1  
 I HEREBY CERTIFY THAT THE PRODUCT ACCOMPLISHED WITH THE SPECIFICATION TO THE INVOICE AND/ OR REMISSION ( DATABASE OF SYSTEM ).  
 ESTE CERTIFICADO ES EMITIDO SEGÚN EN 10204 3.1  
 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  | ORDER (No. OP) | GRADE | MANUFACTUR E PROCESS | HEAT TREATMENT | OUTSIDE DIAMETER MM (IN) | THICKNESS MM (IN) | LENGTH MTS (FT) |
| 18/07/20  | O-151          | A     | E                    | N/A            | 1.900"                   | 0.200"            | 6.40            |

| ONLINE TESTS (PRUEBAS DE CAMPO) |                            |                    |             |                            |                    |              |                 |                   |  |
|---------------------------------|----------------------------|--------------------|-------------|----------------------------|--------------------|--------------|-----------------|-------------------|--|
| HEAT NUMBER (COLADA)            | HYDROSTATIC TEST BAR (PSI) | DELIVERY CONDITION | TIME (Sec.) | NON-DESTRUCTIVE TEST (PND) | METALLOGRAPHY TEST | BENDING TEST | FLATTENING TEST | VISUAL INSPECTION |  |
| 102685                          | 1814                       | AS ROLLED          | 5           | EDDY CURRENT               | FREE MARTENSITE    | N/A          | OK              | OK                |  |

| CHEMICAL ANALYSYS (ANALISIS QUIMICOS)/ MECHANICAL PROPERTIES (PROPIEDADES MECANICAS) |        |        |        |        |                    |                      |         |                |                     |
|--|--------|--------|--------|--------|--------------------|----------------------|---------|----------------|---------------------|
| HEAT NUMBER (COLADA)   | %C     | %Mn    | %P     | %S     | %SI                | %Cr                  | %Mo     | %Ni            | %Cu                 |
| 102685   | 0.0760 | 0.8400 | 0.0130 | 0.0030 | 0.2000             | 0.0410               | 0.0070  | 0.0420         | 0.0340              |
| %Nb  | %B     | %Ti    | %V     |        | YIELD ST MPA (PSI) | TENSILE ST MPA (PSI) | % ELONG | HARDNESS (HRb) | CARBON EQUIVALENT % |
| 0.0070   | 0.0000 | 0.0020 | 0.0020 |        | 52200              | 68800                | 33.000  | 76             | N/A                 |

| CHARPY TEST (PRUEBA CHARPY) |                                |     |     |         |                     |
|-----------------------------|--------------------------------|-----|-----|---------|---------------------|
| HEAT IDENT NUM              | ABSORBED ENERGY MTS-KG (FT-LB) |     |     | AVERAGE | TEMPERATURE TEST °C |
|                             | 1                              | 2   | 3   |         |                     |
| 102685                      | 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 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. Erick Maximino Dávila García

QUALITY ASSURANCE MANAGER