

MILL TEST CERTIFICATE
CERTIFICADO DE PRUEBAS EN FABRICA

Number / Número:
15035722

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Date / Día: **September 15, 2015**

| | | | | |
|--|---|--|---|--|
| Customer / Cliente: PLESA ANAHUAC Y CIAS. S.A. DE C.V. | | Customer's Order Item / Orden Cliente - Item: 21480 ITEM 4 | Customer's Reference / Ref. del Cliente: N/A | Manufacturer's Works Order N° / Confirmación de Venta: 235529/03 |
| Manufacturing Process / Proceso de Manufactura: SEAMLESS HOT ROLLED LAMINADO EN CALIENTE SIN COSTURA | | Product Type / Tipo de Producto: LINE PIPE SEAMLESS CONDUCCION SIN COSTURA | | Surface / Superficie: VARNISHED BARNIZADO |
| Standard or Specification / Normas o Especificaciones: API 5L ED45/DECEMBER 2012, ASTM A106/14, ASTM A53/12, ASME SA106/2013 | | | Steel Grade / Grado de acero: B/X42-L245/L290 PSL1 | Ends / Extremos: NORMAL BEVEL BISELADO NORMAL |
| Dimensions / Dimensiones: 8.625 X 0.5 INCH 219.1 X 12.7 MM | Schedule / Cédula: SCH 080 / W.C XS | Length / Longitud: 19.69 / 21.33 FT 6.00 / 6.50 MTS | Quantity / Cantidad: 17 Pcs/Pz 352.822 FT 15469.850 LB 107.540 MTS 7017.000 KG | Nominal Weight / Peso Nominal: 43.43 LB/FT 64.64 KG/M |

TENSILE TEST / ENSAYO DE TENSION

| Heat N° Colada N° | Sample N° Muestra N° | Specimen condition Condición de la probeta | | | | Specimen dimensions Dimensiones de la probeta | | Test temp Temp. ensayo °C | Y.S. Eul 0.50 % Min: 290 Max: -- MPa | | U.T.S. Req. Min: 415 Max: -- MPa | | Y.S./U.T.S. Req. Max. -- | Elongation / Alargamiento | | |
|----------------------|-------------------------|---|----|--------------|-----|--|------------------------|---------------------------------|--|------|--|------|--------------------------------|---------------------------|---|--|
| | | Ls | Sc | Type Tipo | Ori | Size Tamaño mm | Area Sección mm2 | | Lo | Min. | Obt. | | | | | |
| | | | | | | | | | | | | mm | | % | % | |
| 77767 | 21643 | B | AM | Ss | L | 38.22 X 12.78 | 491,30 | RT | 291 | 484 | 0,60 | 50,8 | 29,5 | 42,0 | | |

| | | | |
|--|--|---|--|
| AM: As manufactured / Según proceso de fabricación | Ls: Location of sample / Ubicación de la muestra | Ori: Orientation / Orientación | Sc: Specimen condition / Condición de la probeta |
| B: Body / Cuerpo | Max: Maximum / Máximo | Req. Max: Required maximum / Máximo requerido | Ss: Strip specimen / Muestra rectangular |
| L: Longitudinal / Longitudinal | Min: Minimum / Mínimo | Req: Required / Requerido | U.T.S: Ultimate tensile strength / Resistencia |
| Lo: Initial length / Longitud inicial | Obt: Obtained / Obtenido | RT: Room temperature / Temperatura ambiente | Y.S: Yield strength / Fluencia |

CHEMICAL COMPOSITION / COMPOSICIÓN QUIMICA

| | | Composition % / Composición % | | | | | | | | | | | | | | | | | | | | | |
|----------------------|-------------------------|-------------------------------|----|-----|----|-----|--------|----|-----|----|----|-----|-----|----|----|----|---------|----|----|--------|--------|--------|----|
| | | X 100 | | | | | X 1000 | | | | | | | | | | X 10000 | | | X 100 | | | |
| | | C | Mn | Si | Mo | Cr | P | S | V | Nb | Ni | Cu | Sn | Al | Ti | As | B | Ca | N | Col. 1 | Col. 2 | Col. 3 | |
| Heat N° Colada N° | Sample N° Muestra N° | H Max | 28 | 120 | -- | 15 | 40 | 30 | 30 | 80 | -- | 400 | 400 | -- | -- | -- | -- | -- | -- | 15 | 100 | 6 | |
| | | Min | -- | 29 | 10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 77767 | 00001 | P Max | 28 | 120 | -- | 15 | 40 | 30 | 30 | 80 | -- | 400 | 400 | -- | -- | -- | -- | -- | -- | 15 | 100 | 6 | |
| | | Min | -- | 29 | 10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 77767 | 21643 | H | 17 | 67 | 27 | 2.3 | 4 | 6 | 2.6 | 0 | 0 | 50 | 108 | 9 | 21 | 0 | 4 | 0 | 14 | 70 | 0 | 22.1 | 0 |
| 77767 | 21643 | P | 18 | 67 | 26 | 2.5 | 5 | 5 | 1.6 | 0 | 0 | 50 | 106 | 8 | 22 | 0 | 3 | 0 | 14 | 67 | 0 | 23.1 | 0 |

This certificate is issued by a computerized system and it is valid with electronic signature. On the original certificate the trade-mark green colored "Tenaris" is stamped. In case the owner of the original certificate would release a copy of it, he must attest its conformity to the original one taking upon himself the responsibility for any unlawful or not allowed use. Any alteration and/or falsification will be subjected to the law.

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| | | | | | | Nominal Weight / Peso Nominal: 43.43 LB/FT 64.64 KG/M | |

CHEMICAL COMPOSITION / COMPOSICIÓN QUÍMICA

| | | Composition % / Composición % | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|-------------------------|-------------------------------|-----|----|-----|----|--------|----|----|-----|----|----|-----|---------|----|----|-------|----|----|--------|--------|--------|------|----|
| | | X 100 | | | | | X 1000 | | | | | | | X 10000 | | | X 100 | | | | | | | |
| | | C | Mn | Si | Mo | Cr | P | S | V | Nb | Ni | Cu | Sn | Al | Ti | As | B | Ca | N | Col. 1 | Col. 2 | Col. 3 | | |
| Heat N° Colada N° | Sample N° Muestra N° | P | Max | 28 | 120 | -- | 15 | 40 | 30 | 30 | 80 | -- | 400 | 400 | -- | -- | -- | -- | -- | -- | 15 | 100 | 6 | |
| | | | Min | -- | 29 | 10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 77767 | 21644 | P | Max | 28 | 120 | -- | 15 | 40 | 30 | 30 | 80 | -- | 400 | 400 | -- | -- | -- | -- | -- | 15 | 100 | 6 | | |
| | | | Min | -- | 29 | 10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | | | 18 | 67 | 27 | 2.5 | 5 | 5 | 2.1 | 0 | 0 | 50 | 104 | 8 | 23 | 0 | 3 | 0 | 16 | 66 | 0 | 22.9 | 0 |

| | | | |
|----------------------------|-------------------|-----------------------|-----------------------|
| Col. 1: SUMA Nb+V+Ti | Col. 3: SUMA Nb+V | Max: Maximum / Máximo | P: Product / Producto |
| Col. 2: SUMA Mo+Cr+Ni+Cu+V | H: Heat / Colada | Min: Minimum / Mínimo | |

THROUGH WALL HARDNESS / DUREZA EN EL ESPESOR

| Heat N° Colada N° | Sample N° Muestra N° | Required values Valores requeridos | | | Individuals / Individuales | | | Average / Promedio | | | Hardness type/Tipo de dureza:HRC | | | | | | | | | | | |
|----------------------|-------------------------|---------------------------------------|-----------|---------|----------------------------|-----------|---------|--------------------|-----------------|---------|----------------------------------|------|------|------|------|------|------|------|------|------|------|-----|
| | | Min: -- | Max: 22.0 | Var: -- | Min: -- | Max: 22.0 | Var: -- | Min: -- | Max: -- | Var: -- | OD | | | | MW | | | | ID | | | |
| | | Specimen condition | | | | | | Quad. | Scale Escala | | | | | | | | | | | | | |
| | | Ls | | Sc | | | | | | 1 | 2 | 3 | Avg. | 1 | 2 | 3 | Avg. | 1 | 2 | 3 | Avg. | |
| 77767 | 21643 | B | | | | | | 1 | HRBW | 72.9 | 73.5 | 73.3 | 73.2 | 75.1 | 74.7 | 75.4 | 75.1 | 74.8 | 74.6 | 75.2 | 74.9 | 1.9 |
| 77767 | 21644 | B | | | | | | 1 | HRBW | 74.0 | 74.2 | 74.4 | 74.2 | 75.5 | 75.3 | 75.3 | 75.4 | 75.3 | 75.3 | 75.5 | 75.4 | 1.2 |

| | | | |
|--|--|--------------------------|--|
| AM: As manufactured / Según proceso de fabricación | ID: Internal diameter / Diámetro interno | Min: Minimum / Mínimo | Quad: Quadrant / Cuadrante |
| Avg: Average / Promedio | Ls: Location of sample / Ubicación de la muestra | MW: Middle wall / Centro | Sc: Specimen condition / Condición de la probeta |

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THROUGH WALL HARDNESS / DUREZA EN EL ESPESOR

| | | | |
|------------------|-----------------------|---|----------------------------|
| B: Body / Cuerpo | Max: Maximum / Máximo | OD: Outside diameter / Diámetro externo | Var: Variation / Variación |
|------------------|-----------------------|---|----------------------------|

FLATTENING TEST / ENSAYO DE APLASTAMIENTO

| Standard / Norma: | | |
|----------------------|-------------------------|---------------------|
| Heat N° Colada N° | Sample N° Muestra N° | Result Resultado |
| 77767 | 21643 | Good / Bueno |

HYDROSTATIC TEST / PRUEBA HIDRAULICA

| Pressure / Presión | | Time / Tiempo | Results / Resultado |
|--------------------|---------------|--------------------|------------------------------|
| Unit / Unidad. | Value / Valor | Seconds / Segundos | |
| mpa | 20.5 | 5 | Satisfactory / Satisfactorio |

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HEAT TREATMENT / TRATAMIENTO TÉRMICO

| |
|--|
| Heat treatment / Tratamiento térmico: Pipe / Tubo |
| Quench media of heat treatment process / Medio de enfriamiento del tratamiento térmico: n/a |
| Temperature Scale / Escala de Temperatura: n/a |
| Type Tipo |
| asrolled |

SUPPLEMENTARY INFORMATION / INFORMACIÓN SUPLEMENTARIA

| Supplementary Information Información Suplementaria | |
|--|--|
| Manufactured by TenarisTamsa Steel making process: Electric Arc Furnace-Ladle Furnace-Continuous Casting Machine. Fully Killed Steel Material free from Mercury contamination Not repaired by welding Non destructive test. Satisfactory Inspection method . - EMI - FLVI - MPI - MATERIAL ACCORDING TO NACE MR0175 / ISO 15156-2, 2009 AND NACE MR0103, 2010 ONLY FOR HARDNESS 22 HRC MAX. Tamsa Ref: 678442 | Fabricado por TenarisTamsa Fabricación del acero: Horno de Arco Eléctrico-Horno de Afinación-Máquina de Colada Continua. Acero calmado con aluminio Material libre de contaminación de Mercurio No reparado por soldadura Control no destructivo. Satisfactorio Método de inspección . - EMI - FLVI - MPI - MATERIAL DE ACUERDO A NACE MR0175 / ISO 15156-2, 2009 Y NACE MR0103, 2010 SOLO DUREZA MAX. 22 HRC Tamsa Ref: 678442 |

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SUMMARY REPORT / REPORTE RESUMEN

| Heat N° Colada N° | Quantity Cantidad (Pieces) | Length Longitud | | Weight Peso (Tons) |
|----------------------|----------------------------------|--------------------|--------|--------------------------|
| | | (ft) | (m) | |
| 77767 | 17 | 352.82 | 107.54 | 7.017 |

| Average length per pipe Longitud promedio por tubo | | Nominal weight per pipe Peso nominal por tubo | |
|---|-------|--|--------|
| (ft) | (m) | (lb/ft) | (kg/m) |
| 20.754 | 6.326 | 43.846 | 65.25 |

This is to certify that the product described here has been manufactured, sampled, tested, and inspected in accordance with purchaser order requirements. This certificate is not a declaration of origin nor may it be used as a declaration of origin.

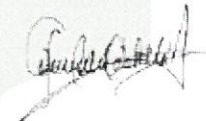
Por el presente certificamos que el material aquí descrito ha sido fabricado, muestreado, ensayado e inspeccionado de acuerdo a los requisitos de su orden de compra. Este certificado no es, ni puede ser usado, como una declaración de origen.

CUSTOMER . THIRD PARTY

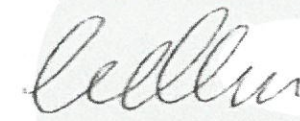
INSPECTION COMPANY
 COMPAÑIA DE INSPECCION

NO APLICA
 Employee Name: N/A

TENARIS QUALITY DEPARTMENT SIGNATURE



QUALITY CERTIFICATION DEPT.
 DEPTO. DE CERTIFICACIÓN DE CALIDAD
 Teresa M. Castellá Abraham



CHIEF OF QUALITY CERTIFICATION DEPT.
 RESPONSABLE DEL DEPTO. DE CERTIFICACIÓN DE CALIDAD
 Angel César Alemán Gil

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