



**MATERIAL TEST REPORT - QUALITY MANAGEMENT SYSTEM**  
 FORZA STEEL - PRODUCTION FACILITY :  
 Carretera Salinas Victoria K.m. 2 s/n Salinas Victoria, Nuevo León, México C.P. 65500 Tel: +52 (51) 1958-3780

|              |   |                          |              |
|--------------|---|--------------------------|--------------|
| Packing List | 0 | Cod (Code):              | FPD-PR-01-05 |
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|              |   | Date of Rev (Fecha Rev): | 27 Nov 2018  |
|              |   | Page (Hoja):             | 1/1          |

CUSTOMER (Cliente)

PURCHASE ORDER (Orden de Compra)

DELIVERY (Remisión)

DATE (Fecha)

REFERENCE NUMBER (No. Referencia)

PLESA ANAHUAC Y CIA.S, S.A DE C.V.

30002

5046608

20/07/2020

20072020-13162

| PIPE TYPE PRODUCT (Tipo de producto)  | FORZA WORK ORDER (OIF) | SIZE (Diámetro) | WALL THICKNESS (Espesor) | HEAT (No. Colada) | SPECIFICATI ON (Especificación Norma) | GRADE (Grado) | LENGTH (Longitud) |       | MASS (Peso Unitario) |        | MASS PER METER (Peso Lineal kg x metros) | HYDROSTATIC TEST (Prueba Hidrostática (psi)) | SPECIAL REQUIREMENTS (Requerimientos especiales) | TUBE NUMBER (No. Piezas)    |                                |
|---|------------------------|-----------------|--------------------------|-------------------|---------------------------------------|---------------|-------------------|-------|----------------------|--------|--|--|--|-----------------------------|--------------------------------|
|   |                        |                 |                          |                   |                                       |               | Metros            | Pies  | Lbs                  | Kg     |  |  |  |                             |                                |
| ERW   | OIF 1561               | 14.000          | 0.312                    | D18510630         | ASTM A53                              | B             | 12.20             | 40.03 | 1814.05              | 822.84 | 67.49                                    | 951  | Barrizado  | 4                           |                                |
| ERW   | OIF 1561               | 14.000          | 0.312                    | D18510645         | ASTM A53                              | B             | 12.20             | 40.03 | 1814.05              | 822.84 | 67.49                                    | 951  | Barrizado  | 6                           |                                |
| ERW   | OIF 1561               | 14.000          | 0.312                    | D18610757         | ASTM A53                              | B             | 12.20             | 40.03 | 1814.05              | 822.84 | 67.49                                    | 951  | Barrizado  | 1                           |                                |
| ERW   | OIF 1561               | 14.000          | 0.312                    | D18810053         | ASTM A53                              | B             | 12.20             | 40.03 | 1814.05              | 822.84 | 67.49                                    | 951  | Barrizado  | 2                           |                                |
| ERW   | OIF 1561               | 14.000          | 0.312                    | D18810056         | ASTM A53                              | B             | 12.20             | 40.03 | 1814.05              | 822.84 | 67.49                                    | 951  | Barrizado  | 13                          |                                |
| ERW   | OIF 1561               | 14.000          | 0.312                    | D18810072         | ASTM A53                              | B             | 12.20             | 40.03 | 1814.05              | 822.84 | 67.49                                    | 951  | Barrizado  | 8                           |                                |
| ERW   | OIF 1726               | 14.000          | 0.312                    | AB9779            | ASTM A53                              | B             | 12.20             | 40.03 | 1814.05              | 822.84 | 67.49                                    | 951  | Barrizado  | 3                           |                                |
| Tuble (Lotes)   |                        |                 |                          |                   |                                       |               |                   |       |                      |        |  |  |  |                             |                                |
| 1561-20-6,1561-10-4,1561-27-19,1561-13-8,1561-10-2,1561-10-6,1561-11-8,1561-16-20,1561-27-12,1561-27-4,1561-16-11,1561-26-12,1561-13-21,1561-27-14,1561-11-20,1726-19-25,1726-19-14,1561-17-22,1561-19-2,1561-10-17,1561-18-2,1561-12-17,1561-15-20,1561-18-19,1561-13-12,1561-19-11,1561-9-17,1561-17-8,1561-20-8,1561-18-6,1726-19-27,1561-16-10,1561-12-7,1561-28-18,1561-10-11,1561-10-12,1561-12-4 |                        |                 |                          |                   |                                       |               |                   |       |                      |        |  |  |  |                             |                                |
| Chemical Analyses (Análisis Químico)  |                        |                 |                          |                   |                                       |               |                   |       |                      |        |  |  |  |                             |                                |
| Heat (Colada)   | C                      | SI              | Mn                       | P                 | S                                     | V             | Cr                | Cu    | Ni                   | Mo     | Yield Strength (K(S)) (Límite elástico)  | Tensile Strength (K(S)) (Última Tensión)     | Tensile Strength (K(S)) (Última Tensión)         | Elongation (%) (Elongación) | Pruebas No Destructivas UT N10 |
| D18510630   | 0.141                  | 0.126           | 0.278                    | 0.018             | 0.0034                                | 0.0028        | 0.041             | 0.021 | 0.0099               | 0.0015 | 63.90                                    | 85.30  | 86.40  | 33                          | ACCEPTED                       |
| D18510645   | 0.158                  | 0.132           | 0.278                    | 0.012             | 0.0029                                | 0.002         | 0.029             | 0.018 | 0.0056               | 0.0015 | 61.50                                    | 87.40  | 84.00  | 35                          | ACCEPTED                       |
| D18610757   | 0.145                  | 0.128           | 0.284                    | 0.015             | 0.0034                                | 0.002         | 0.034             | 0.017 | 0.0061               | 0.0012 | 60.00                                    | 80.40  | 86.80  | 38                          | ACCEPTED                       |
| D18810053   | 0.136                  | 0.132           | 0.294                    | 0.015             | 0.0047                                | 0.0016        | 0.042             | 0.015 | 0.0081               | 0.001  | 60.60                                    | 87.60  | 96.30  | 34                          | ACCEPTED                       |
| D18810056   | 0.157                  | 0.127           | 0.273                    | 0.013             | 0.010                                 | 0.0034        | 0.025             | 0.022 | 0.0078               | 0.0017 | 47.00                                    | 74.50  | 82.40  | 39                          | ACCEPTED                       |
| D18810072   | 0.155                  | 0.126           | 0.274                    | 0.013             | 0.011                                 | 0.028         | 0.028             | 0.023 | 0.0065               | 0.0014 | 58.10                                    | 78.80  | 84.00  | 37                          | ACCEPTED                       |
| AB9779  | 0.045                  | 0.014           | 0.707                    | 0.013             | 0.000                                 | 0.001         | 0.110             | 0.247 | 0.104                | 0.029  | 50.10                                    | 65.60  | 69.60  | 40                          | ACCEPTED                       |
| Mechanical Test (Pruebas mecánicas)   |                        |                 |                          |                   |                                       |               |                   |       |                      |        |  |  |  |                             |                                |
|   |                        |                 |                          |                   |                                       |               |                   |       |                      |        |  | MB   | WV   |                             |                                |

Forza Steel certifica que los productos descritos en este documento fueron fabricados en cumplimiento con los requerimientos de la especificación descrita, obteniendo resultados satisfactorios en todas sus pruebas e inspecciones incluidas en los planes de calidad de Forza Steel para cumplir con los requerimientos del pedido en referencia.  
 Forza steel certifies that the products described in this document were manufactured in compliance with the requirements of the specification described, obtaining satisfactory results in all tests and inspections included in the quality plans of Forza Steel to meet the requirements of the order in reference.

Certify By (Autorizo)  
  
 Ing. Edgar Eduardo Ortiz Hernandez  
 Control de Calidad y Laboratorio (Responsable)





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PLESA ANAHUAC Y CIA S., S.A DE C.V. 30002 5046608 20/07/2020 20072020-13162

| PIPE TYPE PRODUCT (Tipo de producto) | FORZA WORK ORDER (OIF) | SIZE (Diámetro) | WALL THICKNESS (Espesor) | HEAT (No. Colada) | SPECIFICATI ON (Especificación Norma) | GRADE (Grado) | LENGTH (Longitud) |       | MASS (Peso Unitario) |        | MASS PER MEETER (Peso lineal kg x metros) | HYDROSTATIC TEST (Prueba Hidrostática (psi)) | SPECIAL REQUIREMENTS (Requerimientos especiales) | TUBE NUMBER (No. Piezas) |
|--------------------------------------|------------------------|-----------------|--------------------------|-------------------|---------------------------------------|---------------|-------------------|-------|----------------------|--------|---|--|--|--------------------------|
|                                      |                        |                 |                          |                   |                                       |               | Metros            | Pies  | Lbs                  | Kg     |   |  |  |                          |
| ERW                                  | OIF 1561               | 14.000          | 0.312                    | D18510630         | ASTM A53                              | B             | 12.20             | 40.03 | 1814.05              | 822.84 | 67.49                                     | 951  | Barnizado  | 4                        |
| ERW                                  | OIF 1561               | 14.000          | 0.312                    | D18510645         | ASTM A53                              | B             | 12.20             | 40.03 | 1814.05              | 822.84 | 67.49                                     | 951  | Barnizado  | 6                        |
| ERW                                  | OIF 1561               | 14.000          | 0.312                    | D18610757         | ASTM A53                              | B             | 12.20             | 40.03 | 1814.05              | 822.84 | 67.49                                     | 951  | Barnizado  | 1                        |
| ERW                                  | OIF 1561               | 14.000          | 0.312                    | D18810053         | ASTM A53                              | B             | 12.20             | 40.03 | 1814.05              | 822.84 | 67.49                                     | 951  | Barnizado  | 2                        |
| ERW                                  | OIF 1561               | 14.000          | 0.312                    | D18810056         | ASTM A53                              | B             | 12.20             | 40.03 | 1814.05              | 822.84 | 67.49                                     | 951  | Barnizado  | 13                       |
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| ERW                                  | OIF 1726               | 14.000          | 0.312                    | AB9779            | ASTM A53                              | B             | 12.20             | 40.03 | 1814.05              | 822.84 | 67.49                                     | 951  | Barnizado  | 3                        |

**Chemical Analyses (Análisis Químico)**

| Heat (Colada) | C     | Si    | Mn    | P     | S      | V      | Cr    | Cu    | Ni     | Mo     | Yield Strength (KSI) (Límite elástico) | Tensile Strength (KSI) (Última tensión) | Tensile Strength (KSI) (Última Tensión) | Elongation (%) (Elongación) | Pruebas No Destructivas UT N10 |
|---------------|-------|-------|-------|-------|--------|--------|-------|-------|--------|--------|--|---|---|-----------------------------|--------------------------------|
| D18510630     | 0.141 | 0.126 | 0.278 | 0.018 | 0.0034 | 0.0028 | 0.041 | 0.021 | 0.0099 | 0.0015 | 63.90                                  | 85.30                                   | 86.40                                   | 33                          | ACCEPTED                       |
| D18510645     | 0.158 | 0.132 | 0.278 | 0.012 | 0.0029 | 0.002  | 0.029 | 0.018 | 0.0056 | 0.0015 | 61.50                                  | 87.40                                   | 84.00                                   | 35                          | ACCEPTED                       |
| D18610757     | 0.145 | 0.128 | 0.284 | 0.013 | 0.0034 | 0.002  | 0.034 | 0.017 | 0.0061 | 0.0012 | 60.00                                  | 80.40                                   | 86.80                                   | 38                          | ACCEPTED                       |
| D18810053     | 0.136 | 0.132 | 0.284 | 0.015 | 0.0047 | 0.0016 | 0.042 | 0.015 | 0.0081 | 0.001  | 60.60                                  | 87.60                                   | 96.30                                   | 34                          | ACCEPTED                       |
| D18810056     | 0.157 | 0.127 | 0.273 | 0.013 | 0.010  | 0.0034 | 0.025 | 0.022 | 0.0078 | 0.0017 | 47.00                                  | 74.50                                   | 82.40                                   | 39                          | ACCEPTED                       |
| D18810072     | 0.155 | 0.126 | 0.274 | 0.013 | 0.011  | 0.028  | 0.028 | 0.023 | 0.0065 | 0.0014 | 58.10                                  | 78.80                                   | 84.00                                   | 37                          | ACCEPTED                       |
| AB9779        | 0.045 | 0.014 | 0.707 | 0.013 | 0.000  | 0.001  | 0.110 | 0.247 | 0.104  | 0.029  | 50.10                                  | 65.60                                   | 69.60                                   | 40                          | ACCEPTED                       |

Certify By (Autorizo)

Forza Steel certifica que los productos descritos en este documento fueron fabricados en cumplimiento con los requerimientos de la especificación descrita, obteniendo resultados satisfactorios en todas sus pruebas e inspecciones incluidas en los planes de fuerza steel para cumplir con los requerimientos del pedido en referencia.  
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 Control de Calidad y Laboratorio  
 (responsable)