

| Classifications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                          |                                                                                                   |                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|---------------------------------------------------------------------------------------------------|--------------------------------------------------|
| EN ISO Norme A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | EN ISO Classification A                  | AWS/SFA Norme A                                                                                   | AWS/SFA Classification A                         |
| EN ISO 17632-A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | T 50 6 1Ni P M21 1 H5                    | AWS A5.29 / SFA-5.29                                                                              | E81T1-Ni1M-JH4                                   |
| Caractéristiques et domaines d'application                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                          |                                                                                                   |                                                  |
| Description courte                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Caractéristiques principales             | Applications                                                                                      |                                                  |
| <p>Seamless rutile, Nickel alloyed, flux cored wire for single- or multilayer welding of Carbon, Carbon-Manganese steels and high strength steels with Argon-CO<sub>2</sub>. Main features: excellent weldability in all positions, excellent bead appearance, very low spatter losses, fast freezing and easy to remove slag.</p> <p>The exceptional mechanical properties of this wire even at low temperatures (-60°C), also after post weld heat treatment make it especially suitable for offshore applications. The wire is CTOD tested at -10°C. (14°F)</p> <p>This product can be used in sour gas applications. (HIC tested acc. To NACE TM-0284). Test values for SSC are available upon request.</p> | exceptional rutile cored wire with expec | Multi-position rutile cored wire used for low temperature applications, Off-Shore and Wind Energy |                                                  |
| Composition chimique type du fil/du métal déposé hors dilution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                          |                                                                                                   |                                                  |
| C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Si                                       | Mn                                                                                                | Ni                                               |
| 0.05 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0.45 %                                   | 1.3 %                                                                                             | 0.85 %                                           |
| Propriétés mécaniques - Condition 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                          |                                                                                                   |                                                  |
| Condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Limite d'élasticité Re                   | Contrainte à la rupture Rm                                                                        | Allongement A (L <sub>0</sub> =5d <sub>0</sub> ) |
| u                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 550 (>= 500) MPa                         | 610 (560 - 690) MPa                                                                               | 25 (>= 19) %                                     |
| Température 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Résilience 1 ISO-V KV                    | Température 2                                                                                     | Résilience 2 ISO-V KV                            |
| -60 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 75 (>= 47) J                             | -40 °C                                                                                            | 100 J                                            |
| Remarques                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                          |                                                                                                   |                                                  |
| u: untreated, as welded - shielding gas M21; s: stress relieved 550 -600°C / 2h - shielding gas M21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                          |                                                                                                   |                                                  |

| Propriétés mécaniques - Condition 2 |                        |                            |                                                                                                     |
|-------------------------------------|------------------------|----------------------------|-----------------------------------------------------------------------------------------------------|
| Condition                           | Limite d'élasticité Re | Contrainte à la rupture Rm | Allongement A (L0=5d0)                                                                              |
| s                                   | 520 ( $\geq$ 500) MPa  | 580 (560 - 690) MPa        | 29 ( $\geq$ 19) %                                                                                   |
| Température 1                       | Température 2          | Résilience 2 ISO-V KV      | Remarques                                                                                           |
| -60 °C                              | -40 °C                 | 60 J                       | u: untreated, as welded - shielding gas M21; s: stress relieved 550 -600°C / 2h - shielding gas M21 |
| Agréments                           |                        |                            |                                                                                                     |
| ABS                                 | BV                     | CE                         | CWB                                                                                                 |
| X                                   | X                      | X                          | X                                                                                                   |
| DB                                  | DNV-GL                 | LR                         | RINA                                                                                                |
| X                                   | X                      | X                          | X                                                                                                   |
| TÜV                                 |                        |                            |                                                                                                     |
| X                                   |                        |                            |                                                                                                     |
| Details welding consumables         |                        |                            |                                                                                                     |
| ABS                                 | CE                     | CLASS AWS                  | CLASS EN ISO                                                                                        |
| 5YQ460 H5                           | X                      | E81T1-Ni1M-JH4             | T 50 6 1Ni P M21 1 H5                                                                               |
| CWB                                 | DB                     | DNV-GL                     | LR                                                                                                  |
| X                                   | X                      | V Y46MS(H5)                | DXVuO-BF-5Y46S-H5-NA                                                                                |
| NORM AWS                            | NORM EN ISO            | RINA                       | TÜV                                                                                                 |
| AWS A5.29 / SFA-5.29                | EN ISO 17632-A         | 4Y 40 S H5 / 4Y S H5       | X                                                                                                   |