



# CEWELD AA M550SR

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                  |                      |        |                         |     |          |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|----------------------|--------|-------------------------|-----|----------|
| TYPE                                        | Seamless, Nickel-Molybdenum alloyed, metalcored wire. ( Type T55 6 1NiMo, E 91T)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                  |                      |        |                         |     |          |
| APPLICATIONS                                | CEWELD® AA M500 offers a unique weld metal with less than 1% nickel, even after PWHT, for steels up to 550 MPa yield strength.<br>Areas of application are:<br>Crane, steel, ship and apparatus construction, offshore, hoists, drilling rigs, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                  |                      |        |                         |     |          |
| PROPERTIES                                  | CEWELD® AA M500 has a remarkably stable and spatter-free arc. Excellent for automated welding applications such as orbital mag or robotic welding. This wire offers a unique weld metal with less than 1% nickel that fully complies with NACE requirements and covers multiple processes up to a yield strength of 500 MPa. CEWELD AA M500 can also be used for constructions that require post-weld heat treatment and still provide mechanical properties equivalent to class 5Y46. Due to the continuous manufacturing process, the hydrogen content is less than 3 ml/100 g of weld metal even after prolonged storage in unconditioned condition.                                                                                                                                                                                                                                                                                   |                                  |                      |        |                         |     |          |
| CLASSIFICATION                              | AWS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | A 5.36: E91T15-M21P4-K1-H4       |                      |        |                         |     |          |
|                                             | EN ISO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 18276-A: T 55 6 1NiMo M M21 1 H5 |                      |        |                         |     |          |
|                                             | F-nr                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 6                                |                      |        |                         |     |          |
|                                             | FM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2                                |                      |        |                         |     |          |
| SUITABLE FOR                                | <b>ReH ≤ 550 MPa ISO 15608: 1.2 (275 &lt; ReH &lt; 360 MPa), 1.3 (ReH &gt; 360 MPa &lt; 550 MPa)</b><br>1.8900, 1.8901, 1.8902, 1.8903, 1.8905, 1.8907, 1.8910, 1.8912, 1.8915, 1.8917, 1.8930, 1.8932, 1.8935, 1.8937, 1.8970, 1.8971, 1.8972, 1.8973, 1.8975<br>S460N, S420N, S460NL, P460N, StE 420, StE 460, StE 500, StE 550 TStE 380, S420NL, P460NL1, P420NH, P460NH, TStE 420, TStE 460, TStE 500, TStE 550 WStE 380, WStE 420, WStE 460, WStE 500, WStE 550, StE 385.7, StE 385.7 TM, StE 415, L485ME<br>ASTM A 203 Gr. D, E; A 350 Gr. LF1, LF2, LF3; A 420 Gr. WPL3, WPL6; A 516 Gr. 60, 65, 70; A 572 Gr. 42, 50, 55, 60, 65; A 633 Gr. A, D, E; A 662 Gr. A, B, C; A 707 Gr. L1, L2, L3; A 738 Gr. A; A 841 A, B, C; API 5 L X52, X60, X65, X52Q, X60Q, X65Q<br>Oceanfit 52, Oceanfit 60, Oceanfit 65, Oceanfit 355, Oceanfit 420, Oceanfit 460, PAS 460-550, alform® 500 M, 550 M, aldur 500 Q, 500 QL, aldur 550 Q, 550 QL |                                  |                      |        |                         |     |          |
| APPROVALS                                   | CE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                  |                      |        |                         |     |          |
| WELDING POSITIONS                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                  |                      |        |                         |     |          |
| TYPICAL CHEMICAL ANALYSIS OF WELD METAL (%) | C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Si                               | Mn                   | P      | S                       | Ni  | Mo       |
|                                             | 0.05                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.5                              | 1.3                  | 0.015  | 0.015                   | 0.9 | 0.35     |
| MECHANICAL PROPERTIES                       | Heat Treatment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | R <sub>P0,2</sub> (MPa)          | R <sub>m</sub> (MPa) | A5 (%) | Impact Energy (J) ISO-V |     | Hardness |
|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                  |                      |        | -60°C                   |     |          |
|                                             | As Welded                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 600                              | 740                  | 20     | 60                      |     |          |
|                                             | 580°C±15°C 2h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 580                              | 640                  | 25     | 50                      |     | HRc      |
| REDRYING                                    | Not required                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                  |                      |        |                         |     |          |
| GAS ACC. EN ISO 14175                       | M21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                  |                      |        |                         |     |          |