



# CEWELD AA B890SR

| TYPE  | Medium alloyed, high-strength flux-cored wire for M21 shielding gas   |                |                            |                      |                              |                         |                    |          |                         |      |           |     |       |       |     |     |     |               |     |     |    |    |  |     |
|---|---|----------------|----------------------------|----------------------|------------------------------|-------------------------|--------------------|----------|-------------------------|------|-----------|-----|-------|-------|-----|-----|-----|---------------|-----|-----|----|----|--|-----|
| APPLICATIONS                                | Crane-, plant-, craft- and steel construction, pipe work, foundries.  |                |                            |                      |                              |                         |                    |          |                         |      |           |     |       |       |     |     |     |               |     |     |    |    |  |     |
| PROPERTIES                                  | Remarkable crack resistant weld metal in combination with very low hydrogen content. Therefore, suitable for the economic processing of high-strength and low temperature fine-grained structural steels. Excellent welding properties in short and spray arc. Excellent gap bridging for root welds. High deposition rate and no intermediate cleaning required with very low spatter loss. Weld metal is heat treatable.  |                |                            |                      |                              |                         |                    |          |                         |      |           |     |       |       |     |     |     |               |     |     |    |    |  |     |
| CLASSIFICATION                              | <table border="0"> <tr> <td>AWS</td> <td>A 5.36: E130T5-M21A4-K4-H4</td> </tr> <tr> <td>EN ISO</td> <td>18276-A: T 89 0 Z B M21 3 H5</td> </tr> <tr> <td>F-nr</td> <td>6</td> </tr> <tr> <td>FM</td> <td>4</td> </tr> </table>  | AWS            | A 5.36: E130T5-M21A4-K4-H4 | EN ISO               | 18276-A: T 89 0 Z B M21 3 H5 | F-nr                    | 6                  | FM       | 4                       |      |           |     |       |       |     |     |     |               |     |     |    |    |  |     |
| AWS   | A 5.36: E130T5-M21A4-K4-H4  |                |                            |                      |                              |                         |                    |          |                         |      |           |     |       |       |     |     |     |               |     |     |    |    |  |     |
| EN ISO                                      | 18276-A: T 89 0 Z B M21 3 H5  |                |                            |                      |                              |                         |                    |          |                         |      |           |     |       |       |     |     |     |               |     |     |    |    |  |     |
| F-nr  | 6   |                |                            |                      |                              |                         |                    |          |                         |      |           |     |       |       |     |     |     |               |     |     |    |    |  |     |
| FM  | 4   |                |                            |                      |                              |                         |                    |          |                         |      |           |     |       |       |     |     |     |               |     |     |    |    |  |     |
| SUITABLE FOR                                | <p><b>Reh ≤ 890 MPa ISO 15608: 5.1</b><br/>           1.7220, 1.7225, 1.7228, 1.7336<br/>           13 CrMoSi5-5, 13CrMo4-5, 25CrMo4, 26 CrMo4-2, 34CrMo4, 42CrMo4, 50CrMoSi5-5, 28NiCrMo44,<br/>           (S690Q-S890Q, S690QL-S890QL)<br/>           ASTM A 829M, A387, SAE 4135-37, 4140-45, 4150<br/>           UNS G41350-70, G41400-50, G41500<br/>           40CD4, 42CD4 / 40CD4u, 42CD4u<br/>           Firmodur 7225, 7227., Thyssen TK 7225, 7227</p>   |                |                            |                      |                              |                         |                    |          |                         |      |           |     |       |       |     |     |     |               |     |     |    |    |  |     |
| APPROVALS                                   | CE  |                |                            |                      |                              |                         |                    |          |                         |      |           |     |       |       |     |     |     |               |     |     |    |    |  |     |
| WELDING POSITIONS                           |   |                |                            |                      |                              |                         |                    |          |                         |      |           |     |       |       |     |     |     |               |     |     |    |    |  |     |
| TYPICAL CHEMICAL ANALYSIS OF WELD METAL (%) | <table border="1"> <thead> <tr> <th>C</th> <th>Si</th> <th>Mn</th> <th>P</th> <th>S</th> <th>Cr</th> <th>Ni</th> <th>Mo</th> </tr> </thead> <tbody> <tr> <td>0.05</td> <td>0.5</td> <td>1.5</td> <td>0.015</td> <td>0.015</td> <td>0.5</td> <td>2.2</td> <td>0.5</td> </tr> </tbody> </table>   | C              | Si                         | Mn                   | P                            | S                       | Cr                 | Ni       | Mo                      | 0.05 | 0.5       | 1.5 | 0.015 | 0.015 | 0.5 | 2.2 | 0.5 |               |     |     |    |    |  |     |
| C   | Si  | Mn             | P                          | S                    | Cr                           | Ni                      | Mo                 |          |                         |      |           |     |       |       |     |     |     |               |     |     |    |    |  |     |
| 0.05  | 0.5   | 1.5            | 0.015                      | 0.015                | 0.5                          | 2.2                     | 0.5                |          |                         |      |           |     |       |       |     |     |     |               |     |     |    |    |  |     |
| MECHANICAL PROPERTIES                       | <table border="1"> <thead> <tr> <th rowspan="2">Heat Treatment</th> <th rowspan="2">R<sub>P0,2</sub> (MPa)</th> <th rowspan="2">R<sub>m</sub> (MPa)</th> <th rowspan="2">A<sub>5</sub> (%)</th> <th colspan="2">Impact Energy (J) ISO-V</th> <th rowspan="2">Hardness</th> </tr> <tr> <th colspan="2">RT</th> </tr> </thead> <tbody> <tr> <td>As Welded</td> <td>920</td> <td>1010</td> <td>17</td> <td colspan="2">75</td> <td>HRc</td> </tr> <tr> <td>620°C±15°C 1h</td> <td>710</td> <td>910</td> <td>18</td> <td colspan="2">55</td> <td>HRc</td> </tr> </tbody> </table> | Heat Treatment | R <sub>P0,2</sub> (MPa)    | R <sub>m</sub> (MPa) | A <sub>5</sub> (%)           | Impact Energy (J) ISO-V |                    | Hardness | RT                      |      | As Welded | 920 | 1010  | 17    | 75  |     | HRc | 620°C±15°C 1h | 710 | 910 | 18 | 55 |  | HRc |
| Heat Treatment                              | R <sub>P0,2</sub> (MPa)   |                |                            |                      |                              | R <sub>m</sub> (MPa)    | A <sub>5</sub> (%) |          | Impact Energy (J) ISO-V |      | Hardness  |     |       |       |     |     |     |               |     |     |    |    |  |     |
|   |   | RT             |                            |                      |                              |                         |                    |          |                         |      |           |     |       |       |     |     |     |               |     |     |    |    |  |     |
| As Welded                                   | 920   | 1010           | 17                         | 75                   |                              | HRc                     |                    |          |                         |      |           |     |       |       |     |     |     |               |     |     |    |    |  |     |
| 620°C±15°C 1h                               | 710   | 910            | 18                         | 55                   |                              | HRc                     |                    |          |                         |      |           |     |       |       |     |     |     |               |     |     |    |    |  |     |
| REDRYING                                    | Not required  |                |                            |                      |                              |                         |                    |          |                         |      |           |     |       |       |     |     |     |               |     |     |    |    |  |     |
| GAS ACC. EN ISO 14175                       | M21   |                |                            |                      |                              |                         |                    |          |                         |      |           |     |       |       |     |     |     |               |     |     |    |    |  |     |