

# CEWELD DUR R (Ni)

| TYPE                                        | Flexible extruded acetylene-oxygen rod consisting of spherical tungsten carbide castings and a nickel-based alloy.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    |          |  |                |                         |                      |                    |          |           |  |  |  |        |           |  |  |  |         |
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| APPLICATIONS                                | CEWELD®DUR R (Ni) offers the highest available wear resistance of all hardfacing alloys in most applications. The deposit offers excellent corrosion resistance combined with tungsten carbides for long life span in extreme applications. The main areas of application are the coating and rebuilding of stabilizers and other oilfield tools where maximum protection is required. Also for screws, impellers, mixer plates in the brick and clay industry and on decanter screws in the food and chemical industry where corrosion resistance is required                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |                    |          |  |                |                         |                      |                    |          |           |  |  |  |        |           |  |  |  |         |
| PROPERTIES                                  | <p>CEWELD® DUR R (Ni) is a newly developed product for hardfacing. It is an extruded acetylene-oxygen rod consisting of spherical tungsten carbide castings and a nickel-based alloy. Crushed cast carbide guarantees a long service life. In addition, the nickel-based alloy offers excellent corrosion resistance. CEWELD® DUR R (Ni) has excellent flow and wetting properties. It is easy to use, so even inexperienced welders can easily achieve smooth deposits without cracks. Multi-layer deposits are possible and worn parts can be restored without removing the old material. The surface should be free of grease, oil, rust, and other foreign matter. Use a larger tip than is generally recommended for mild steel of the same diameter. Also, use a slightly excessive acetylene spring. The deposit is not machinable or forgeable. Only grinding with diamond tools is possible. CEWELD® DUR R (Ni) is available as a 500 mm long flexible rod or endless on coils.</p> <p>Matrix: ~43 HRc<br/>Special carbides (SC): ~3000 HV0.1</p> |                      |                    |          |  |                |                         |                      |                    |          |           |  |  |  |        |           |  |  |  |         |
| CLASSIFICATION                              | EN ISO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 14700: T Ni20        |                    |          |  |                |                         |                      |                    |          |           |  |  |  |        |           |  |  |  |         |
| SUITABLE FOR                                | Scratchers, Mixers, Deep drilling, Bentonit mixers, Cement mixers, Stabilisers, Impellers, Augers etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |                    |          |  |                |                         |                      |                    |          |           |  |  |  |        |           |  |  |  |         |
| APPROVALS                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                      |                    |          |  |                |                         |                      |                    |          |           |  |  |  |        |           |  |  |  |         |
| WELDING POSITIONS                           | <div>PAPBPC</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                      |                    |          |  |                |                         |                      |                    |          |           |  |  |  |        |           |  |  |  |         |
| TYPICAL CHEMICAL ANALYSIS OF WELD METAL (%) | <table><tr><th colspan="5">WSC</th></tr><tr><td colspan="5">65</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                      |                    |          |  | WSC            |                         |                      |                    |          | 65        |  |  |  |        |           |  |  |  |         |
| WSC                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                      |                    |          |  |                |                         |                      |                    |          |           |  |  |  |        |           |  |  |  |         |
| 65                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                      |                    |          |  |                |                         |                      |                    |          |           |  |  |  |        |           |  |  |  |         |
| MECHANICAL PROPERTIES                       | <table><tr><th>Heat Treatment</th><th>R<sub>P0,2</sub> (MPa)</th><th>R<sub>m</sub> (MPa)</th><th>A<sub>5</sub> (%)</th><th>Hardness</th></tr><tr><td>As Welded</td><td></td><td></td><td></td><td>45 HRc</td></tr><tr><td>As Welded</td><td></td><td></td><td></td><td>3000 HV</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                      |                    |          |  | Heat Treatment | R <sub>P0,2</sub> (MPa) | R <sub>m</sub> (MPa) | A <sub>5</sub> (%) | Hardness | As Welded |  |  |  | 45 HRc | As Welded |  |  |  | 3000 HV |
| Heat Treatment                              | R <sub>P0,2</sub> (MPa)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | R <sub>m</sub> (MPa) | A <sub>5</sub> (%) | Hardness |  |                |                         |                      |                    |          |           |  |  |  |        |           |  |  |  |         |
| As Welded                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                      |                    | 45 HRc   |  |                |                         |                      |                    |          |           |  |  |  |        |           |  |  |  |         |
| As Welded                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                      |                    | 3000 HV  |  |                |                         |                      |                    |          |           |  |  |  |        |           |  |  |  |         |
| REDRYING                                    | Not required                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                    |          |  |                |                         |                      |                    |          |           |  |  |  |        |           |  |  |  |         |
| HARDNESS                                    | Ni-matrix: ± 480-520 HV, WSC (carbides) ± 2350 HV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                      |                    |          |  |                |                         |                      |                    |          |           |  |  |  |        |           |  |  |  |         |
| GAS ACC. EN ISO 14175                       | R1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                      |                    |          |  |                |                         |                      |                    |          |           |  |  |  |        |           |  |  |  |         |