



# CEWELD E 410 NiMo

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                     |                         |                      |                    |          |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------------|----------------------|--------------------|----------|
| TYPE                                        | Basic coated high performance electrode for surfacing and joint welding of ferritic-martensitic ferritic-martensitic chromium steels. ( 410NiMo, E 13 4)                                                                                                                                                                                                                                                                                                                                                                            |                     |                         |                      |                    |          |
| APPLICATIONS                                | CEWELD® E 410NiMo is used for welding similar martensitic and martensitic-ferritic steels in various applications such as water turbines, compressor construction, steam power plant construction, continuous casting rolls, centrifuges, valves, Pelton and Francis turbines. For thicker materials (over 10 mm), preheating to a maximum of 150°C is recommended, followed by tempering or normalizing after welding. When welding joints, a bufferlayer with CEWELD® CroNi 29/9 S or CEWELD® 4370 Ti electrode is often advised. |                     |                         |                      |                    |          |
| PROPERTIES                                  | CEWELD® E 410NiMo has comparable properties to steels of the same or similar types. It is resistant to water and steam.<br>The preheating and interpass temperature should be 100 - 160°C for thick-walled parts. The heat input should be max. 15 kJ/cm. Annealing at 580 - 620°C is possible.                                                                                                                                                                                                                                     |                     |                         |                      |                    |          |
| CLASSIFICATION                              | AWS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | A 5.4: E 410NiMo    |                         |                      |                    |          |
|                                             | EN ISO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 3581-A: E 13 4 B 42 |                         |                      |                    |          |
|                                             | F-nr                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4                   |                         |                      |                    |          |
|                                             | FM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 5                   |                         |                      |                    |          |
| SUITABLE FOR                                | <b>13%Cr - 4%Ni - 0,5%Mo Steel</b><br>1.4000, 1.4001, 1.4002, 1.4313, 1.4317, 1.4407, 1.4413, 1.4414,<br>GX4CrNi13-4, X3CrNiMo13-4, GX5CrNiMo13-4, GX4CrNiMo13-4, X 6 Cr 13, X 7 Cr 14, X 6 CrAl 13<br>ACI Gr. CA 6 NM                                                                                                                                                                                                                                                                                                              |                     |                         |                      |                    |          |
| APPROVALS                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                     |                         |                      |                    |          |
| WELDING POSITIONS                           | <div> PA</div> <div> PB</div> <div> PC</div> <div> PF</div>                                                                                                                             |                     |                         |                      |                    |          |
| TYPICAL CHEMICAL ANALYSIS OF WELD METAL (%) | C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Si                  | Mn                      | Cr                   | Ni                 | Mo       |
|                                             | 0.055                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.77                | 0.65                    | 13                   | 4.1                | 0.6      |
| MECHANICAL PROPERTIES                       | Heat Treatment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                     | R <sub>P0,2</sub> (MPa) | R <sub>m</sub> (MPa) | A <sub>5</sub> (%) | Hardness |
|                                             | 605°C- 645°C 8h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                     | 600                     | 800                  | 25                 | 310 HB   |
| REDRYING                                    | 300°C / 2 hr                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                     |                         |                      |                    |          |
| GAS ACC. EN ISO 14175                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                     |                         |                      |                    |          |



# CEWELD E 410 NiMo

E 410 NIMO 2,5 X 350MM

| Packaging | KG/unit | EanCode       |
|-----------|---------|---------------|
| Can       | 2,5     | 8720663411549 |

E 410 NIMO 3,2 X 350MM

| Packaging | KG/unit | EanCode       |
|-----------|---------|---------------|
| Can       | 2,5     | 8720663411556 |

E 410 NIMO 4,0 X 350MM

| Packaging | KG/unit | EanCode       |
|-----------|---------|---------------|
| Can       | 2,5     | 8720663411563 |