



# CEWELD Alloy 33

| TYPE                                           | High-chromium austenitic alloy                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                   |                |                         |                      |                    |                         |                         |          |          |        |           |     |     |    |     |     |     |   |      |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|----------------|-------------------------|----------------------|--------------------|-------------------------|-------------------------|----------|----------|--------|-----------|-----|-----|----|-----|-----|-----|---|------|
| ANWENDUNGEN                                    | Typical applications of Alloy 33 include heat exchangers, condenser tubes and other equipment for the Refinery Industry and the Chemical Process Industry as well as light weight structures in the Offshore Industry. Especially the multi-purpose character of Alloy 33 with respect to its corrosion resistance as well to acidic and alkaline media as to chloride bearing cooling waters opens a wide variety of applications        |                                                                   |                |                         |                      |                    |                         |                         |          |          |        |           |     |     |    |     |     |     |   |      |
| EIGENSCHAFTEN                                  | CEWELD Alloy 33 is a high-chromium austenitic Alloy. This alloy combines ease of fabrication with outstanding resistance to highly oxidizing media                                                                                                                                                                                                                                                                                        |                                                                   |                |                         |                      |                    |                         |                         |          |          |        |           |     |     |    |     |     |     |   |      |
| KLASSIFIKATION                                 | AWS<br>EN ISO<br>W.Nr.<br>F-nr<br>FM                                                                                                                                                                                                                                                                                                                                                                                                      | A 5.9: ER33-31<br>14343-B: S Z 33 32 1 Cu N L<br>1.4591<br>6<br>6 |                |                         |                      |                    |                         |                         |          |          |        |           |     |     |    |     |     |     |   |      |
| GEEIGNET FÜR                                   | 1.4591, 1.4583<br>X 1CrNiMoCuN 33 32, X 1CrNiMoCuN 33 32 1, X 2 CrNiMo 18 10<br>Alloy 33, 1.4591                                                                                                                                                                                                                                                                                                                                          |                                                                   |                |                         |                      |                    |                         |                         |          |          |        |           |     |     |    |     |     |     |   |      |
| ZULASSUNGEN                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                   |                |                         |                      |                    |                         |                         |          |          |        |           |     |     |    |     |     |     |   |      |
| SCHWEISSPOSITIONEN                             | <div>    </div> |                                                                   |                |                         |                      |                    |                         |                         |          |          |        |           |     |     |    |     |     |     |   |      |
| TYPISCHE CHEMISCHE ANALYSE DES FÜLLMETALLS (%) | <table><tr><td>C</td><td>Si</td><td>Mn</td><td>Cr</td><td>Ni</td><td>Mo</td><td>N</td><td>Cu</td><td>Fe</td></tr><tr><td>0.01</td><td>0.3</td><td>1.5</td><td>33</td><td>32</td><td>1.5</td><td>0.5</td><td>1</td><td>Rem.</td></tr></table>                                                                                                                                                                                              |                                                                   | C              | Si                      | Mn                   | Cr                 | Ni                      | Mo                      | N        | Cu       | Fe     | 0.01      | 0.3 | 1.5 | 33 | 32  | 1.5 | 0.5 | 1 | Rem. |
| C                                              | Si                                                                                                                                                                                                                                                                                                                                                                                                                                        | Mn                                                                | Cr             | Ni                      | Mo                   | N                  | Cu                      | Fe                      |          |          |        |           |     |     |    |     |     |     |   |      |
| 0.01                                           | 0.3                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1.5                                                               | 33             | 32                      | 1.5                  | 0.5                | 1                       | Rem.                    |          |          |        |           |     |     |    |     |     |     |   |      |
| MECHANISCHE GÜTEWERTE                          | <table><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>RT</th><th>-196°C</th></tr><tr><td>As Welded</td><td>450</td><td>920</td><td>42</td><td>100</td><td>32</td><td>HRc</td></tr></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       | -196°C | As Welded | 450 | 920 | 42 | 100 | 32  | 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             | -196°C                  |                      |                    |                         |                         |          |          |        |           |     |     |    |     |     |     |   |      |
| As Welded                                      | 450                                                                                                                                                                                                                                                                                                                                                                                                                                       | 920                                                               | 42             | 100                     | 32                   | HRc                |                         |                         |          |          |        |           |     |     |    |     |     |     |   |      |
| RÜCKTROCKNUNG                                  | Not required                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                   |                |                         |                      |                    |                         |                         |          |          |        |           |     |     |    |     |     |     |   |      |
| GAS ACC. EN ISO 14175                          | I1                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                   |                |                         |                      |                    |                         |                         |          |          |        |           |     |     |    |     |     |     |   |      |



# CEWELD Alloy 33

ALLOY 33 1,0MM

| Packaging | KG/unit | EanCode       |
|-----------|---------|---------------|
| BS-300    | 15      | 8720663419767 |