

| Classifications   |  |   |   |  |                           |     |      |
|---|--|---|---|--|---------------------------|-----|------|
| EN ISO 14343-A  | EN ISO 14343-B                             | AWS A5.9                                | Mat. No.  |  |                           |     |      |
| W 22 9 3 N L  | SS2209                                     | ER2209                                  | ≈1.4462   |  |                           |     |      |
| Characteristics and typical fields of application   |  |   |   |  |                           |     |      |
| Duplex stainless steel; resistant to intercrystalline corrosion and wet corrosion up to 250 °C (482 °F). Good resistance to stress corrosion cracking in chlorine- and hydrogen sulphide-bearing environment. High Cr- and Mo-contents provide resistance to pitting corrosion. For joining and surfacing work with matching and similar austenitic steels / cast steel grades. Attention must be paid to embrittlement susceptibility of the parent metal. |  |   |   |  |                           |     |      |
| Base materials  |  |   |   |  |                           |     |      |
| TÜV-certified duplex stainless steels<br>1.4462 – X2CrNiMoN22-5-3 and others,<br>combinations of mentioned steels and ferritic steels up to<br>S355J, 16Mo3 and 1.4583 – X10CrNiMoNb18-12   |  |   |   |  |                           |     |      |
| Typical analysis of the TIG rods (wt.-%)  |  |   |   |  |                           |     |      |
|   | C  | Si                                      | Mn  | Cr   | Mo                        | Ni  | N    |
| wt-%  | 0.02                                       | 0.4                                     | 1.7   | 22.5   | 3.2                       | 8.8 | 0.15 |
| <b>Structure:</b> Austenite/ferrite   |  |   |   |  |                           |     |      |
| Mechanical properties of all-weld metal   |  |   |   |  |                           |     |      |
| Heat-treatment  | Yield strength<br>R <sub>p0.2</sub>        | Yield strength<br>R <sub>p1.0</sub>     | Tensile strength<br>R <sub>m</sub>  | Elongation<br>A (L <sub>0</sub> =5d <sub>0</sub> ) | Impact work<br>ISO-V KV J |     |      |
|   | MPa  | MPa                                     | MPa   | %  | +20 °C                    |     |      |
| aw  | 600  | 650                                     | 720   | 25   | 100                       |     |      |
| Operating data  |  |   |   |  |                           |     |      |
| <b>Polarity:</b><br>DC (–)  | <b>Shielding gas:</b><br>(EN ISO 14175) I1 | <b>Marks:</b><br>‡ W 22 9 3 NL / ER2209 |   | <b>ø (mm)</b>                                      | <b>L mm</b>               |     |      |
|   |  |   |   | 1.6  | 1000                      |     |      |
|   |  |   |   | 2.0  | 1000                      |     |      |
|   |  |   |   | 2.4  | 1000                      |     |      |
|   |  |   |   | 3.2  | 1000                      |     |      |
| Welding instruction   |  |   |   |  |                           |     |      |
| Materials   |  | Preheating                              | Postweld heat treatment   |  |                           |     |      |
| Matching / similar steels / cast steel grades   |  | None                                    | Mostly none; if necessary solution annealing at 1050 °C (1922 °F) / water |  |                           |     |      |
| Approvals   |  |   |   |  |                           |     |      |
| TÜV (03343), ABS, DNV, GL, LR, CE   |  |   |   |  |                           |     |      |