VAUTID 50
Tubular wire and welding rod
Hardfacing material for high impact and shock

**Specification**
- **Tubular wire electrode**
  - DIN EN 14700 T Fe9 kp
- **Welding rod**
  - DIN EN 14700 E Fe9 kp

**Material type**
- **Alloy components**
  - Manganese steel, alloy on iron base with Chromium additions
  - C – Cr – Mn – Fe

**Weld deposit characteristics**
- VAUTID 50 produces an austenitic (non-magnetic), tough and crack-free deposit with high strength. Shock loads result in strong, superficial work-hardening. The weld deposit is characterized by its good compatibility with all weldable steels. It is suited for flame-cutting.

**Weld deposit properties**
- **Tensile strength**: 850 N/mm²
- **Yield point**: 650 N/mm²
- **Elongation A5**: approx. 25%
- **Hardness (acc. DIN 32525-4)**:
  - 200 – 250 HB* in welding condition
  - 40 – 55 HRC* work-hardened

**Recommended applications**
- Very well suited for hardfacing of parts mainly subjected to shock loads and for regeneration of black manganese steel, e.g. crusher rolls, beating arms, hammers, dredger teeth exposed to shock and rails switches

**Standard sizes**
- **Tubular wire**:
  - Diameter: 1,6 / 2,0 / 2,4 / 2,8 / 3,2 mm
  - Packing: Mandrels 15 kg, Reels 25 kg, Drums 250 kg

- **Welding rods**:
  - Diameter: 3,25 / 4,0 / 5,0 / 6,0 mm
  - Packing: 5 kg packages

**Welding instructions for tubular wire**
VAUTID 50 tubular wires are welded without inert gas on the +pole (a.c. is possible). Several layers can be welded. The wire alloys welding with an extremely long stickout for a higher rate.

<table>
<thead>
<tr>
<th>Diameter (mm)</th>
<th>Current (A)</th>
<th>Voltage (V)</th>
<th>Stick out (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,6</td>
<td>180 – 250</td>
<td>25 – 30</td>
<td>20 – 35</td>
</tr>
<tr>
<td>2,0</td>
<td>180 – 300</td>
<td>25 – 30</td>
<td>25 – 45</td>
</tr>
<tr>
<td>2,4</td>
<td>250 – 380</td>
<td>25 – 30</td>
<td>30 – 50</td>
</tr>
<tr>
<td>2,8</td>
<td>200 – 450</td>
<td>25 – 30</td>
<td>35 – 55</td>
</tr>
<tr>
<td>3,2</td>
<td>290 – 470</td>
<td>28 – 30</td>
<td>30 – 55</td>
</tr>
</tbody>
</table>

**Welding instructions for welding rods**
VAUTID 50 – welding rods can be welded with d.c. on the +pole but also with a.c. Several layers can be welded. It is not necessary to re-dry the electrodes prior to welding.

<table>
<thead>
<tr>
<th>Diameter (mm)</th>
<th>Current (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,25</td>
<td>100 – 120</td>
</tr>
<tr>
<td>4,0</td>
<td>120 – 160</td>
</tr>
<tr>
<td>5,0</td>
<td>170 – 210</td>
</tr>
<tr>
<td>6,0</td>
<td>210 – 250</td>
</tr>
</tbody>
</table>

This data sheet corresponds to the present state of production (October 2016) and can be changed anytime.

* subject to common industrial fluctuations