VAUTID 18/8/6
Tubular wire and welding rod
Hardfacing material for impact, pressure and buffer layers

VAUTID Material characteristics

Specification
Tubular wire electrode  DIN EN 14700 T Fe10 cknpz
Welding rod  DIN EN 14700 E Fe10 cknpz

Material type
Alloy components
chromium-nickel-manganese-austenite on iron-base
C – Cr – Ni – Mn – Fe

Weld deposit characteristics
VAUTID 18/8/6 produces corrosion-resistant, austenitic steel weld deposit with high elongation values. The weld deposit is tough and can be work-hardened

Weld deposit properties
Tensile strength: approx. 580 N/mm²
Elongation A5: approx. 40%
Hardness of pure welding material (DIN 32525-4): 180-200 HB*
approx. 38 HRC* (work-hardened)

Recommended applications
Buffer layers for welding on black manganese steel, for welding on hardenable steel and for welding of hardfacings. Hardfacing on rails, switches, tumblers, striking pins, components subjected to thermal stress, e.g. in rockwool production

Standard sizes and packaging:
Tubular wire: Diameters: 1,6 / 2,0 / 2,4 / 2,8 / 3,2 mm
Packing: Mandrels approx. 15 kg, Reels of approx. 25 kg, Drums of approx. 250 kg
Welding rods: Diameters 3,25 / 4,0 / 5,0 / 6,0 mm
Packing: 5 kg packages

Welding instructions for tubular wires:
VAUTID 18/8/6 tubular wires are welded open-arc without inert gas on the +pole, usually with string bead technique. Restrict intermediate layer temperatures to a maximum of 450 °C where demands are made on the the weld deposit. When welding on black manganese steel the intermediate layer temperature may not exceed 300 °C. Cool if necessary.

<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>100 – 220</td>
<td>26 – 28</td>
<td>20 – 35</td>
</tr>
<tr>
<td>2,0</td>
<td>180 – 310</td>
<td>26 – 28</td>
<td>25 – 35</td>
</tr>
<tr>
<td>2,4</td>
<td>200 – 240</td>
<td>25 – 29</td>
<td>30 – 40</td>
</tr>
<tr>
<td>2,8</td>
<td>320 – 430</td>
<td>26 – 30</td>
<td>30 – 45</td>
</tr>
<tr>
<td>3,2</td>
<td>290 – 470</td>
<td>28 – 30</td>
<td>30 – 55</td>
</tr>
</tbody>
</table>

Welding positions (EN ISO 6947): PA, PB

Welding instructions for welding rods:
VAUTID 18/8/6 welding rods can be welded with d.c. on the +pole but also with a.c. It is not necessary to re-dry the electrodes prior to welding. VAUTID-18/8/6 welding rods are high-performance electrodes with a deposition rate of 170%.

<table>
<thead>
<tr>
<th>Diameter (mm)</th>
<th>Current (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,25</td>
<td>100 – 200</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.