Grade Ergste® 1.4305UA/UB
Ergste®1.4305UA/UB are stainless austenitic chromium nickel machining steels. Due to the high sulfur content Ergste®1.4305UA has an excellent machinability as well as a moderate corrosion resistance. In contrast Ergste®1.4305UB has a more stable structure due to the higher nickel and copper content and an increased corrosion resistance.

Typical Fields of Application
- surgical instruments
- dental instruments
- components for braces

Corresponding Standards
- DIN EN 10088-3 (X8 CrNiS 18-9)
- ASTM F899 AISI 303 (UNS S30300)

Weldability
Ergste®1.4305UA/UB are conditionally weldable because the material tends to hot cracks due to the desulfurization. Friction welding is recommended, if welding is necessary.

Magnetism
Ergste®1.4305UA/UB are not magnetizable in annealed condition.

Corrosion Resistance
Due to the high sulfur content Ergste®1.4305UA/UB are severely corrodbile in all media.
PREN figure: 17-20,76 (not considering the impact of sulfur)

Typical Chemical Composition
<table>
<thead>
<tr>
<th>C</th>
<th>Si</th>
<th>Mn</th>
<th>P</th>
<th>S</th>
<th>Cr</th>
<th>Ni</th>
</tr>
</thead>
<tbody>
<tr>
<td>max. 0.10</td>
<td>max. 1.00</td>
<td>mx. 2.00</td>
<td>max. 0.045</td>
<td>0.15 – 0.35</td>
<td>17.00 – 19.00</td>
<td>8.00 – 10.00</td>
</tr>
</tbody>
</table>
Heat Treatment

Solution Annealing
Temperature: 1,832 – 2,012 °F
Cooling: Air, Water

Machining
Ergste® 1.4305UA is characterized by an outstanding machinability.

Hot Working
Forging at 2,192 – 1,652 °F
Working in the lower temperature levels is more appropriate to prevent hot cracks.