**DESCRIPTION**

ACX 800 is a titanium stabilized ferritic stainless steel. It exhibits good high temperature oxidation resistance and good corrosion resistance in low corrosive media. Because of the titanium addition and the low carbon and nitrogen content, this steel shows good forming and weldability.

**CHEMICAL COMPOSITION**

<table>
<thead>
<tr>
<th>C</th>
<th>Si</th>
<th>Mn</th>
<th>P</th>
<th>S</th>
<th>Cr</th>
<th>Ti</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤0.030</td>
<td>≤0.75</td>
<td>≤0.80</td>
<td>≤0.040</td>
<td>≤0.015</td>
<td>10.50-12.25</td>
<td>≥6 (C+N)</td>
</tr>
</tbody>
</table>

**APPLICATIONS**

- Exhaust systems: muffler, catalytic converter
- Tubes

**MECHANICAL PROPERTIES AFTER COLD ROLLING AND FINAL ANNEALING**

- $R_{p0.2}$ > 220 N/mm²
- $R_m$ 380 - 560 N/mm²
- Elongation > 25%
- Hardness < 170 HB

**PHYSICAL PROPERTIES**

At 20°C it has a density of 7.7 kg/dm³ and a specific heat of 460 J/kg·K

<table>
<thead>
<tr>
<th>Property</th>
<th>20°C</th>
<th>100°C</th>
<th>200°C</th>
<th>300°C</th>
<th>400°C</th>
<th>500°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modulus of elasticity (GPa)</td>
<td>220</td>
<td>215</td>
<td>210</td>
<td>205</td>
<td>195</td>
<td>-</td>
</tr>
<tr>
<td>Mean coefficient of linear expansion between 20°C ($10^{-6}$ x K⁻¹) and</td>
<td>-</td>
<td>10.5</td>
<td>11</td>
<td>11.5</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Thermal conductivity (W/m·K)</td>
<td>25</td>
<td>26</td>
<td>27</td>
<td>28</td>
<td>28.5</td>
<td>28.7</td>
</tr>
<tr>
<td>Electrical resistivity (Ω·mm²/m)</td>
<td>0.60</td>
<td>0.65</td>
<td>0.80</td>
<td>0.90</td>
<td>1.05</td>
<td>1.10</td>
</tr>
</tbody>
</table>

**WELDING**

The recommended consumable electrodes are the following:

- Shielded electrodes: E 19 9 L, ER 308L
- Wire and rods: G 19 9 L (GMAW), W 19 9 L (GTAW), P 19 9 L (PAW), S 19 9 L (ER 208L)
- Hollow electrodes: T 13 Ti, ER 308L

**CORROSION RESISTANCE**

ACX 800 offers mechanical and corrosion resistance better than carbon steels. It also shows adequate oxidation resistance to be used in exhaust systems.

**STRESS CORROSION CRACKING**

As ferritic stainless steel the ACX 800 exhibits good stress corrosion cracking resistance.
The maximum scale-breaking temperature for ACX 800 is 800°C in continuous exposure. The maximum working temperature may vary strongly depending on the involved media.

**CLEANING SURFACE**
Wash the surface with neutral soap and water applied with a cloth or a brush without scratching the stainless steel. Then, always rinse the stainless steel with water to remove completely the cleaning agent. Finally, it is recommended to dry the surface to preserve a good superficial condition. In severe environments, a frequent cleaning is strongly recommended.

**SPECIFICATIONS**
It can be delivered according to EN-10088-2 and ASTM/A-480M standard requirements.