Martensitic
X15TN Rods
Instrumentation

High hardness stainless steel with high friction and wear strength, and a much better corrosion resistance than 17%Cr1%C equivalent grade. The X15TN is obtained by double melting, the remelting operation by consumable electrode allowing an increasing ductility and fatigue strength.

The X15TN is produced by Aubert & Duval.

CheMical analysis

<table>
<thead>
<tr>
<th>C</th>
<th>Cr</th>
<th>Mo</th>
<th>V</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.40</td>
<td>15.50</td>
<td>2.00</td>
<td>0.30</td>
<td>0.20</td>
</tr>
</tbody>
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PHYSICAL PROPERTIES

Density…………………… 7.7 g/cm³ (0.278 lb/in³)
Coefficient of thermal expansion between 20° C and 200° C (68° F and 390° F) :
…………………………..10.4 x 10⁻⁶ m/m.°C (5.78 in/(in.°F))

FORGING
1200/1000°C (2200/1830° F)

ANNEALING
Heating at 840° C (1540° F). Slow cooling.
In the annealed condition, hardness is about 207 HB.

HEAT TREATMENT

Treatment for 58 HRC :
- Heating at 1050°C (1920° F)
- Gas or oil quench
- Low temperature treatment at -80°C (-110° F)
- Tempering at 180°C (355° F)
- Hardness Δ ≥ 58 HRC

Treatment for 55 HRC :
- Heating at 1010°C (1850° F)
- Gas or oil quench
- Tempering at 180°C (355° F)
- Hardness Δ ≥ 55 HRC

APPLICATIONS

Cutting surgical instruments
Drills, reamers, gouges, cutters, saw blades
Wear resistant cutting devices
Screwdrivers, cutting guides

STANDARDS

NFS 94090
1.4123
X40 Cr Mo V N16-2
ASTM F 899 AISI 420 Mod.