PRODEC® 316/316L Reduces Production Time by 50%

**Specifications**

UNS: S31600, S31603  W. Nr./EN: 1.4401, 1.4404  ASTM: A 276, A 479  AMS: 5648, 5653

<table>
<thead>
<tr>
<th>Cr</th>
<th>Ni</th>
<th>C</th>
<th>Mn</th>
<th>P</th>
<th>S</th>
<th>Si</th>
<th>Mo</th>
<th>Ni</th>
<th>Fe</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIN</td>
<td>16.0</td>
<td>10.0</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>0.015</td>
<td>–</td>
<td>2.0</td>
<td>–</td>
</tr>
<tr>
<td>MAX</td>
<td>18.0</td>
<td>14.0</td>
<td>0.03</td>
<td>2.0</td>
<td>0.04</td>
<td>0.03</td>
<td>0.75</td>
<td>3.0</td>
<td>0.1</td>
</tr>
</tbody>
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**Case History**

For over 25 years, AAA Machine Shop in Fletcher, North Carolina has provided machining and fabrication services to a variety of customers. Their diverse capabilities include CNC milling and turning, O.D. grinding, gear cutting, and precision welding.

AAA Machine Shop switched from standard 316/316L to PRODEC 316/316L due to its enhanced machining characteristics. The PRODEC material is supplied by Rolled Alloys and processed by turning, grooving, drilling, and tapping to manufacture fluid regulators. While processing the PRODEC bars, AAA Machine Shop achieved higher cutting speeds and material feeds resulting in a 50% reduction in production time and extended tool life.

When AAA Machine Shop received their first PRODEC 316/316L bar they initially processed it with standard 316/316L tooling specifications. At lower speeds they experienced less than optimal long stringy chips. The machinist progressively increased feeds and speeds and noted improvement in the chip breaking. AAA Machine Shop reported the following increase in productivity while processing PRODEC 316/316L:

<table>
<thead>
<tr>
<th></th>
<th>Standard 316/316L</th>
<th>PRODEC 316/316L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cutting Speed, sfpm</td>
<td>550</td>
<td>700</td>
</tr>
<tr>
<td>Feed, IPR</td>
<td>0.007</td>
<td>0.010</td>
</tr>
<tr>
<td>Cut Depth, in</td>
<td>0.020</td>
<td>0.040</td>
</tr>
</tbody>
</table>

Dean Preston (Owner) states, “The PRODEC bars could be run at even faster speeds. Due to our part dimensions we have a relatively small area to hold in our chucks. This limits how aggressive we can be.” By choosing PRODEC 316/316L, part production time has reduced by 50% and tool life has been increased.

Rolled Alloys inventories PRODEC 316/316L from ¼” to 14” in diameter at locations throughout the United States, Canada, Europe and Asia. PRODEC quality round bars are also available from Rolled Alloys in 303 and 304/304L stainless steels.
The data and information in this printed matter are believed to be reliable. However, this material is not intended as a substitute for competent professional engineering assistance which is a requisite to any specific application. Rolled Alloys makes no warranty and assumes no legal liability or responsibility for results to be obtained in any particular situation, and shall not be liable for any direct, indirect, special, or consequential damage therefrom. This material is subject to revision without prior notice.

Superior Service
Over 50 Bar Saws • Local Inventories • Instant Quote and Ordering Online
Next Day/Same Day Delivery • No Minimum Order
Up to 20 Inch Diameter Cutting Capacity • Precision Cut Slugs +0.063/-0.00 Inches
Titanium Conversion for Custom Requirements • True Flat Bar and Gauered Flat Bar

Superior Quality
PRODEC® Stainless Steel Bar for Premium Machinability and Consistency
Precision Ground (0.002” to 0.005” Tolerance) • DFARS Compliant

Industry Approvals
ISO 9001:2008 • AS91100
Biomet International Approval • Pratt & Whitney LCS
GEAE (General Electric Aircraft Engine) • Rolls-Royce

Bar Processing Center Locations
Houston, Texas: 1-800-728-1440            •  Tulsa, Oklahoma: 1-866-664-4298
Richburg, South Carolina: 1-866-211-7006

E-mail: barsales@rolledalloys.com

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