

## N08020 • 2.4660 • TPS-Techalloy 20

Niobstabilisierte Nickel-Knetlegierung mit Molybdän, Chrom und Kupfer. Ausgezeichnete Beständigkeit gegen Spannungsrisskorrosion, gute Beständigkeit in verdünnter Schwefelsäure. Anwendung unter anderem in der Schwefel-, Phosphor- und Flusssäureerzeugung und Wärmetauschern in Raffinerien.

| Werkstoff | Norm                     | Chemische Zusammensetzung • Massenanteile in % |      |      |       |       |               |               |             |          |                                    |
|-----------|--------------------------|--|------|------|-------|-------|---------------|---------------|-------------|----------|------------------------------------|
|           |                          | C  | Si   | Mn   | P     | S     | Cr            | Ni            | Mo          | Ti       | Sonst.                             |
|           |                          | max.   | max. | max. | max.  | max.  | min. – max.   | min. – max.   | min. – max. |          |                                    |
| 2.4660    | DIN 17744 / 1<br>7751    | 0,070  | 1,00 | 2,00 | 0,025 | 0,015 | 19,00 - 21,00 | 32,00 - 38,00 | 2,00 - 3,00 | Co. 1,50 | Cu 3-4; Nb+Ta 8xC max.;<br>Fe Rest |
| N08020    | ASME SB / AS<br>TM B 729 | 0,070  | 1,00 | 2,00 | 0,045 | 0,035 | 19,00 - 21,00 | 32,00 - 38,00 | 2,00 - 3,00 | -        | Cu 3-4; Nb+Ta 8xC max.;<br>Fe Rest |

| Werkstoff | Norm                     | Mechanische Eigenschaften und Wärmebehandlung |              |             |       |          |                 |
|-----------|--------------------------|---|--------------|-------------|-------|----------|-----------------|
|           |                          | Rp 0,2 [MPa]                                  | Rp 1,0 [MPa] | Rm [MPa]    | A [%] | Härte    | Wärmebehandlung |
|           |                          | min.  | min.         | min. – max. | min   | HRB max. |                 |
| 2.4660    | DIN 17744 / 1<br>7751    | 240   | -            | 550         | 40    | 95       | weichgeglüht    |
| N08020    | ASME SB / AS<br>TM B 729 | 240   | -            | 550         | 30    | -        | geglüht         |

| Fertigrohrtoleranzen |           |           |            |           |
|----------------------|-----------|-----------|------------|-----------|
| AD - Rohr            | AD        | WD        | Spezial WD | ID        |
| ab Ø4,550 mm         | ±0,050 mm | ±0,150 mm | ±0,100 mm  | X         |
| ab Ø9,530 mm         | ±0,050 mm | ±0,100 mm | ±0,080 mm  | ±0,050 mm |
| ab Ø30,001 mm***     | ±0,100 mm | ±0,150 mm |            | ±0,050 mm |

\*\*\* Bis max. Ø44,500 mm

- Toleranzen nach DIN EN 10305-1 können bestätigt werden bis AD 30 mm
- Toleranzen nach DIN EN ISO 1127 / DIN EN 10216-5 können bestätigt werden
- Toleranzen nach ASTM können generell bestätigt werden

Abmessungsbereich\*

Abmessungsspektrum

| AD    | WD     | [mm]   | 0,89  | 1,00 | 1,20 | 1,24  | 1,65  | 1,82  | 2,00 | 2,11  | 2,30 | 2,35  | 2,50 | 2,60 | 2,64  | 2,77  | 2,87  | 3,00 | 3,20  | 3,25  | 3,60 | 3,85 | 3,91  | 4,00 | 4,40 | 5,50 | 6,35  | 7,00 |
|-------|--------|--------|-------|------|------|-------|-------|-------|------|-------|------|-------|------|------|-------|-------|-------|------|-------|-------|------|------|-------|------|------|------|-------|------|
| [mm]  | [inch] | [inch] | 0,035 |      |      | 0,048 | 0,065 | 0,072 |      | 0,083 |      | 0,093 |      |      | 0,104 | 0,109 | 0,113 |      | 0,126 | 0,128 |      |      | 0,154 |      |      |      | 0,250 |      |
| 6,00  |        |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 6,35  | 0,250  |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 7,00  |        |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 7,50  |        |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 8,00  |        |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 9,00  |        |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 9,53  | 0,375  |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 10,00 |        |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 11,00 |        |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 12,70 | 0,500  |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 13,00 |        |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 15,00 |        |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 15,88 | 0,625  |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 16,00 |        |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 16,80 |        |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 17,15 | 0,675  |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 18,00 |        |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 19,00 |        |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 19,05 | 0,750  |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 20,00 |        |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 21,34 | 0,840  |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 22,00 |        |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 22,23 | 0,875  |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 23,00 |        |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 25,00 |        |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 25,40 | 1,000  |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 26,00 |        |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 26,67 | 1,050  |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 28,00 |        |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 30,00 |        |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 31,75 | 1,250  |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 32,00 |        |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 33,40 | 1,315  |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 36,00 |        |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 38,10 | 1,500  |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 42,00 |        |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |
| 44,50 | 1,750  |        |       |      |      |       |       |       |      |       |      |       |      |      |       |       |       |      |       |       |      |      |       |      |      |      |       |      |

