

## DD14Ti

### Mild non-alloy extra steels for direct cold-forming

Material no.	–
according to	4.1 - 1
Tensile strength class	A

#### General

For particularly complex forming operations, we offer steel grades DD14 Ti (titaniumalloyed) and DD14 Bor (boron-alloyed). Characteristics of this steel grade are a low yield strength and high elongation. Owing to these exceptionally good forming properties, the steel satisfies requirements even for most complex components. The yield strength ratio lies between 0.65 and 0.85.

Salzgitter Flachstahl offers this steel grade in two analysis variants.

#### Chemical composition<sup>1)</sup> (in percent by weight)

	min.	max.
C		0.08 %
Mn <sup>2)</sup>		0.25 %
Si		0.05 %
P		0.025 %
S		0.015 %
Ti	0.005 %	0.020 %
Al		0.080 %
N		0.008 %

1) Heat analysis

2) The manganese content of the manganese-alloyed analysis variant is about Mn = 0.15-0.50%. This results in slightly higher strengths.

#### Mechanical properties<sup>2)</sup>

Yield strength R <sub>p0.2</sub>	
longitudinal	200 – 280 MPa
transversal	210 – 300 MPa

Tensile strength R <sub>m</sub>	
longitudinal	300 – 375 MPa
transversal	320 – 380 MPa

Total elong. A <sub>80</sub> <sup>3)</sup>	
longitudinal	≥ 32 %
transversal	≥ 30 %

Total elong. A <sub>5</sub> <sup>3)</sup>	
longitudinal	≥ 35 %
transversal	≥ 34 %

2) The manganese-alloyed variant has slightly higher strengths.

3) It applies to nominal thickness e:  
e < 3 mm: A<sub>80</sub>  
e ≥ 3 mm: A<sub>5</sub>

#### Available dimensions

Hot-rolled coils unpickled, mill edge

Thickness in mm	Width in mm
1.50 – 1.79	900 – 1,250
1.80 – 1.99	900 – 1,400
2.00 – 2.24	900 – 1,520
2.25 – 2.49	900 – 1,700
2.50 – 5.99	900 – 1,880
6.00 – 8.00	900 – 1,950

Thicknesses up to 25 mm on request.  
Widths ≤ 2,000 mm on request.

Hot-rolled coils pickled, mill edge

Thickness in mm	Width in mm
1.50 – 1.79	900 – 1,250
1.80 – 1.99	900 – 1,400
2.00 – 2.24	900 – 1,520
2.25 – 2.49	900 – 1,700
2.50 – 5.99	900 – 1,880
6.00 – 8.00	900 – 1,530

Thicknesses up to 10 mm on request.

Hot-rolled coils pickled, trimmed edge

Thickness in mm	Width in mm
1.50 – 1.79	900 – 1,230
1.80 – 1.99	900 – 1,380
2.00 – 2.24	900 – 1,500
2.25 – 2.49	900 – 1,680
2.50 – 5.99	900 – 1,860
6.00 – 8.00	900 – 1,510

Thicknesses up to 10 mm on request.

Hot-rolled wide strip, slit lengthwise

Thickness in mm	Width in mm
1.50 – 1.79	100 – 515
1.80 – 1.99	100 – 635
2.00 – 2.24	100 – 760
2.25 – 7.00	100 – 800
7.01 – 8.00	140 – 800

Thicknesses up to 10 mm on request.  
Widths ≤ 100 mm on request.