

# 1018 AISI (USA)

## Standards

AISI

American Iron and Steel Institute

## Chemical composition

**C** 0.15 - 0.20

**Mn** 0.6 - 0.9

**P** < 0.04

**S** < 0.05

**Fe** Rest

Si : By agreement

When boron treatment for killed steels is specified, the steels can be expected to contain 0.0005 - 0.003% B.

If the usual titanium additive is not permitted, the steels can be expected to contain B > 0.005.

## Properties

By ASTM A311

Normal Draft Cold Drawn and Stress Relieved Annealed

Diameter or thickness: < 20 mm ;

**Yield Strength: > 415 MPa**

**Tensile Strength: > 486 MPa**

**Elongation: > 18 %**

**Reduction of area: > 40 %**

Diameter or thickness: 20 - 30 mm ;

**Yield Strength: > 380 MPa**

**Tensile Strength: > 450 MPa**

**Elongation: > 16 %**

**Reduction of area: > 40 %**

Diameter or thickness: 30 - 50 mm ;

**Yield Strength: > 345 MPa**

**Tensile Strength: > 415 MPa**

**Elongation: > 15 %**

**Reduction of area: > 35 %**

Diameter or thickness: > 50 mm ;

**Yield Strength: > 310 MPa**

**Tensile Strength: > 380 MPa**

**Elongation: > 15 %**

**Reduction of area: > 35 %**