

ASTM A 193 Gr.B8P

STAINLESS STEEL

CLASS 1

BOLTING MATERIAL FOR LOW TEMPERATURE SERVICE

ASTM A 193 Gr.B8P Class 1 covers alloy and stainless steel bolting material for pressure vessels, valves, flanges, and fittings for high-temperature service. The term bolting material as used in this specification covers bars, bolts, screws, studs, stud bolts, and wire. Bars and wire shall be hot-wrought. The material may be further processed by centerless grinding or by cold drawing. Austenitic stainless steel may be carbide solution treated or carbide solution treated and strain-hardened.

Chemical Properties

| C | Si | Mn | P | S | Cr | Ni |
|----------|----------|----------|-----------|-----------|-----------|----------|
| 0.08 Max | 1.00 Max | 2.00 Max | 0.045 Max | 0.030 Max | 18.0-20.0 | 8.0-11.0 |

Mechanical Properties

| Yeild strength | Tensile strength | Elongation | Reduction | Hardness |
|----------------|------------------|------------|-----------|----------|
| Min 0.2% Mpa | Min Mpa | Min % | Min % | HRB Max |
| 205 | 515 | 30 | 50 | 96 |

Heat Treatment

Carbide Solution Treated

Equivalent Designation

UNS S30500
Din X5CrNi 18 12
Werkstoff.No. 1.4303
JIS SUS 305
AFNOR Z10 CN 18.9M

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