

ASTM A106 and **ASME SA106** are standard specifications for **seamless carbon steel pipe** intended for high-temperature service, engineered to perform reliably at elevated temperatures and pressures. It is one of the most widely used pipe specifications in industrial piping systems. A/SA106 pipe is used in numerous applications across a variety of industries, including the construction of data centers, oil and gas equipment, refineries, power generation, petrochemical plants, boilers, marine vessels, machined parts and much more!

APP STOCKS A FULL RANGE OF A/SA106 PIPE AND TUBE IN:

- ✓ Grades B and C
- ✓ Schedules 20 through XXH
- ✓ NPS ¼" to 36" OD
- ✓ Wall thickness up to 5.500" thick

KEY CHARACTERISTICS

- ✓ **SEAMLESS CONSTRUCTION** - no weld seam, making it stronger and more reliable under pressure and temperature cycling
- ✓ **HIGH - TEMPERATURE RATED** - suitable for service up to approximately **750°F (400°C)** under ASME codes
- ✓ **TIGHT DIMENSION TOLERANCES** - consistent wall thickness critical for pressure integrity
- ✓ **WELDABLE AND MACHINABLE** - compatible with standard fabrication processes

OUR VALUE-ADDED SERVICES

- ✓ Saw & Torch Cutting, Miter Cutting, Pipe Profiling
- ✓ Coating (FBE, Galvanizing & Prime/Paint)
- ✓ Pipe Beveling, Roll-Grooving & Threading
- ✓ Boring, Honing, OD Turning, Heat Treating & Plating
- ✓ ID & OD Cleaning
- ✓ In-House or 3rd Party Testing

* This information is provided for quick references, always consult applicable ASME, ASTM and Manufacture's standards.

TENSILE REQUIREMENTS

	SEAMLESS		
	GRADE A	GRADE B	GRADE C
TENSILE STRENGTH, MIN., PSI	48,000	60,000	70,000
YIELD STRENGTH, MIN., PSI	30,000	35,000	40,000

CHEMICAL REQUIREMENTS

	GRADE A	GRADE B	GRADE C
CARBON, MAX. %	0.25	0.30*	0.35*
*MANGANESE %	0.27 - 0.93	*0.29 - 1.06	*0.29 - 1.06
PHOSPHOROUS, MAX. %	0.035	0.035	0.035
SULFUR, MAX. %	0.035	0.035	0.035
SILICON, MIN. %	0.10	0.10	0.10
CHROME, MAX. %	0.40	0.40	0.40
COPPER, MAX. %	0.40	0.40	0.40
MOLYBDENUM, MAX. %	0.15	0.15	0.15
NICKEL, MAX. %	0.40	0.40	0.40
VANADIUM, MAX. %	0.08	0.08	0.08

*Unless otherwise specified by the purchaser, for each reduction of 0.01% below the specified carbon maximum, an increase of 0.06% manganese above the specified maximum will be permitted up to a maximum of 1.65% (1.35% for ASME SA106).

PERMISSIBLE VARIATIONS IN WALL THICKNESS

For seamless pipe, ASTM A106 adopts the wall thickness permissible variations established in ASTM A530 (the general requirements standard incorporated by reference into A106), which states:

The minimum wall thickness at any point shall not be more than 12.5% under the nominal wall thickness specified.

PERMISSIBLE VARIATIONS IN WEIGHTS PER FOOT

The weight of any length of pipe 12”NPS and under shall not vary more than 10% over or 3.5% under that specified.

For sizes over 12”NPS, the weight of any length of pipe shall not vary more than 10% over or 5% under that specified.

Unless otherwise specified, pipe of 4”NPS and smaller may be weighed in convenient lots; pipe in sizes larger than 4”NPS shall be weighed separately.

PERMISSIBLE VARIATIONS IN OUTSIDE DIAMETER

It is industry standard for steel pipe mills to produce A106 pipe to a +/- 1% OD tolerance.