

**ALLOY STEEL**

Advanced Materials. Engineered for Performance.

## A335 P22 Seamless Pipe

Alloy Steel | ASTM / ASME: A335 / SA335 Grade P22 | EN: 10CrMo9-10 / 1.7380

| Fittings / flanges: A234 WP22 / A182 F22

2.25Cr-1Mo seamless pipe - the main steam and hot reheat standard. P22 carries creep strength and hydrogen resistance across refinery hot wall piping, superheater headers and heater coils, and is the pipe most often paired with SA387 Grade 22 vessels.


**Stock status:** Mill indent - **Typical lead time:** 4 - 8 weeks mill indent

### Key features

- Seamless, normalised and tempered to ASME SA335
- Creep rupture strength for long term elevated temperature service
- Matched fittings (A234 WP) and flanges (A182 F) available from one source
- Hardness, hydro and ultrasonic test reports with every heat

### Available forms & sizes

| Form                   | Size range                                                |
|------------------------|-----------------------------------------------------------|
| Seamless Pipes & Tubes | 1/2" - 24" NB, SCH 40 - SCH 160 / XXS                     |
| Fittings               | 1/2" - 24" butt weld fittings, WP11 / WP22 / WP91         |
| Flanges                | 1/2" - 24", 150# - 2500#, F11 / F12 / F22 / F5 / F9 / F91 |

### Chemical composition (%)

| Element | Min  | Max  |
|---------|------|------|
| C       | 0.05 | 0.15 |
| Cr      | 2.00 | 2.50 |
| Mo      | 0.90 | 1.10 |
| Si      | -    | 0.50 |
| Mn      | 0.30 | 0.60 |

### Mechanical properties

| Property              | Value   | Unit |
|-----------------------|---------|------|
| Yield Strength (0.2%) | 205 min | MPa  |
| Tensile Strength      | 415 min | MPa  |

| Property   | Value                             | Unit |
|------------|-----------------------------------|------|
| Elongation | 20 min (longitudinal)             | %    |
| Condition  | Normalised and tempered, seamless | -    |

## Physical properties

| Property                | Value                        | Unit  |
|-------------------------|------------------------------|-------|
| Density                 | 7.85                         | g/cm3 |
| Max Service Temperature | 550 - 650 depending on grade | C     |

## Standards

ASTM A335 / ASME SA335, ASTM A234 (fittings), ASTM A182 (flanges), EN 10216-2, EN 10204 3.1 / 3.2

## Equivalent grades

10CrMo9-10, 1.7380, WP22, F22

## Industries served

Power Generation, Petrochemical, Refining, Oil & Gas, Fertiliser

## Typical applications

- Main steam and hot reheat piping
- Superheater and reheater headers
- Refinery hot wall piping and heater coils
- High temperature process lines



Live datasheet