

AVAILABILITY

Seamless Pipe 1/2"-8"
 Weld Pipe 1/2"-24"
 Butt-Weld Fittings 1/2"-24"
 Flanges 1/2"- 24"
 Bar 1"- 8"
 Plate 1/8" - 3"

SPECIFICATIONS

ASTM A790, A815, A182
 ASME SA790, SA815, SA182

CHEMICAL COMPOSITION %

| C | Cr | Fe | Mn | Mo | N | Ni | P | S | Si |
|-------|-----------|-----|-----|-----------|-----------|-----------|------|------|-----|
| Max | | | Max | | | | Max | Max | Max |
| 0.030 | 21.0-23.0 | Bal | 2.0 | 2.50-3.50 | 0.08-0.20 | 4.50-6.50 | 0.03 | 0.02 | 1.0 |

DESCRIPTION

Avesta Sheffield 2205 is a ferritic-austenitic stainless steel which combines many of the beneficial properties of both ferritic and austenitic steels. As a result of high chromium and molybdenum contents, the steel has very good pitting and uniform corrosion resistance to stress corrosion cracking as well as high mechanical strength. 2205 has good weldability and can be welded using most of the welding techniques for stainless steels. Due to the balanced composition, when welded correctly, the heat affected zone contains sufficient austenite to avoid the risk of localized corrosion. The chemical composition of 2205 is balanced to give a microstructure containing roughly equal amounts of ferrite and austenite.

DESIGN FEATURES

- High strength.
- Low thermal expansion and higher heat conductivity than austenitic steels.
- High resistance to stress corrosion cracking, corrosion fatigue and erosion.
- High uniform corrosion resistance.

- High pitting and crevice corrosion resistance.
- Good sulfide stress corrosion cracking resistance.

TYPICAL APPLICATIONS

Heat exchangers, tubes and pipe for production and handling of gas and oil
 Heat exchangers and pipes in desalination plants
 Pressure vessels, pipes, tanks and heat exchangers for processing and transport of various chemicals
 Pressure vessels, tanks and pipes in process industries handling chlorides
 Rotors, fans, shafts and press rolls where the high corrosion fatigue strength can be utilized
 Cargo tanks, piping and welding consumables for chemical tankers

TENSILE REQUIREMENTS

| Tensile Strength (KSI) | Yield Strength (KSI) |
|------------------------|----------------------|
| 65 | 90 |

KSI can be converted to MPA (Megapascals) by multiplying by 6.895.