JAMES DUVA INC.

254SMO

(UNS S31254)

AVAILABILITY

Weld Pipe 3/4″-12″
Butt-Weld Fittings 3/4″-12″
Flanges 3/4″-12″
Bar 1″-8″

SPECIFICATIONS

ASTM A312, A403, A182
ASME SA312, SA403, SA182

CHEMICAL COMPOSITION %

C	Cr	Cu	Mn	Mo	N	Ni	P	Si	S
Max			Max				Max	Max	Max
0.02	19.5-20.5	0.5-1.0	1.0	6.0-6.5	0.18-0.22	17.5-18.5	0.03	0.80	1.01

DESCRIPTION

254SMO is an austenitic stainless steel designed for maximum resistance to pitting and crevice corrosion. With high levels of chromium, molybdenum, and nitrogen, 254SMO is especially suited for high chloride environments such as brackish water, seawater, pulp mill bleach plants and other high chloride process streams. 254SMO offers chloride resistance superior to that of Alloy 904L, Alloy 20, Alloy 825 and Alloy G. 254SMO is compatible with the common austenitic stainless steels. It is often used as a replacement in critical components of larger constructions where Type 316L or 317L has failed by pitting, crevice attack, or chloride stress corrosion cracking. In new construction, 254SMO has been found in many cases to be a technically adequate and much less costly substitute for nickel-based alloys and titanium. 254SMO is substantially stronger than the common austenitic grades, but is also characterized by high ductility and impact strength. 254SMO is readily fabricated and welded.

DESIGN FEATURES

- High resistance to pitting, crevice and general corrosion.
- Very high resistance to chloride stress corrosion cracking.
- 50% stronger than 300-series austenitic stainless steels.
- Excellent impact toughness.
- Excellent workability and weldability.

TYPICAL APPLICATIONS

Seawater handling equipment
Pulp mill bleach systems
Tall oil distillation columns and equipment
Chemical processing equipment
Food processing equipment
Desalination equipment
Flue gas desulfurization scrubbers
Oil and gas production equipment

TENSILE REQUIREMENTS

Tensile Strength (KSI)	Yield Strength (KSI)
94	44

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

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