

## F44

F44 (UNS S31254) is a super-austenitic stainless steel designed for excellent 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 high-chloride process streams. 254SMO offers chloride resistance superior to that of stainless 904L, Incoloy 020 and Incoloy 825.

It is suitable for service temperatures up to approx. 400°C.

It is listed in NACE MR 0175 for sour service and has gained ASME Approval for Pressure Vessel applications.

### Chemical Composition, %

element	Cr	Ni	Fe	Mo	Cu	N	C	Mn	Si	P	S
min.	19.50	17.50	bal.	6.00	0.50	0.18					
max.	20.50	18.50		6.50	1.00	0.22	0.020	1.00	0.80	0.030	0.010

*Chemical Composition according to ASTM. Some compositional limits of other specifications may vary slightly.*

### Designation and standards

National Standards	Material designation	Chemical composition	Forgings	Rod and bar	Plate and sheet	Strip	Seamless tube
ASTM ASME NACE	UNS S31254 F44	A959 SA959 MR0175	A182 SA182 A473 SA473	A276 SA276 A479 SA479 A193 SA193 A194 SA194	A240 SA240	A240 SA240	A312 SA312 A269 SA269 A270 SA270
DIN	1.4547 X1CrNiMoN20-18-7	DIN 10088-1	DIN 10250-4	DIN 10088-3 DIN 10272	DIN 10088-2 DIN 10028-7	DIN 10088-2 DIN 10028-7	
GB/T	015Cr20Ni18Mo6CuN 00Cr20Ni18Mo6CuN S31252	GB/T 20878					

**Density** 8.00g/cm<sup>3</sup>

### Corrosion resistance

- excellent resistance to pitting and crevice corrosion in halide media
- high resistance to chloride stress corrosion cracking
- excellent resistance to a wide range of chemical media, even at higher temperatures and concentrations, incl. sulphuric acid, wet-process phosphoric acid, sour gas, seawater, salts and organic acids

### Applications

Typical applications are:

- 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

You could send email to [sales@huishih.com](mailto:sales@huishih.com) for more information.

Copyright HUISHIH Alloy Corporation.

The data contained in this publication is for informational purposes only and may be revised at any time without prior notice.