310S

310S (UNS S31008) is the low carbon version of austenitic stainless steel 310, developed for use in high temperature corrosion resistant applications. Because of its high chromium and moderate nickel content, Type 310S is resistant to sulfidation and can also be used in moderately carburizing atmospheres. Type 310S also finds usage in cryogenic applications with low magnetic permeability and toughness down to -268℃

Chemical Composition, %

element	Cr	Ni	Fe	C	Mn	Si	P	S
min.	24.00	19.00	bal.					
max.	26.00	22.00		0.080	2.00	1.00	0.045	0.030

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 SAE	UNS S31008 310S	A959 SA959	AMS5651	A276 SA276 AMS5651	A240 SA240 AMS5521	A240 SA240 AMS5521	A213 SA213 A249 SA249 A312 SA312
DIN	1.4845 X8CrNi25-21	DIN 10088-1	DIN 10095	DIN 10088-3	DIN 10088-2	DIN 10088-2	DIN 10297-2
GB/T	06Cr25Ni20 0Cr25Ni20 S31008	GB/T 20878	NB/T 47010 JB/T 6398 YB/T 5089	GB/T 1220 GB/T 1221 GB/T 4226	GB/T 3280 GB/T 4237 GB/T 4238	GB/T 3280 GB/T 4237 GB/T 4238	GB/T 13296 GB/T 14976

Density 7.90g/cm^3

Corrosion resistance

- oxidation resistance up to 1100℃
- moderate strength at high temperature
- resistance to hot corrosion
- strength and toughness at cryogenic temperatures

Applications

Typical applications are:

- fluidized bed coal combustor
- tube hangers for petroleum refining and steam boilers
- cryogenic structures
- coal gasifier internal components

You could send email to sales@huishih.com for more information.