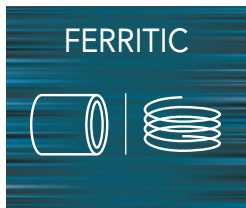


NSSC SERIES

FERRITIC



High Corrosion Resistant Ferritic Stainless Steel

NSSC 190

19Cr-2Mo-Nb,Ti-L LC,N/Similar grade: SUS 444

Features and Applications

While the weak points of austenitic stainless steel are their susceptibility to stress corrosion cracking, NSSC 190 ferritic stainless steel demonstrates excellent resistance to stress corrosion cracking and further offers outstanding performance and major improvements in intergranular, pitting and crevice corrosion resistance.

(NSSC 190 is mainly suitable for sheets, while NSSC 190L is suitable for plates.)

1. Excellent resistance to stress corrosion cracking and intergranular corrosion.
2. Superior to SUS 304 in pitting corrosion resistance and crevice corrosion resistance.
3. Good formability and weldability.

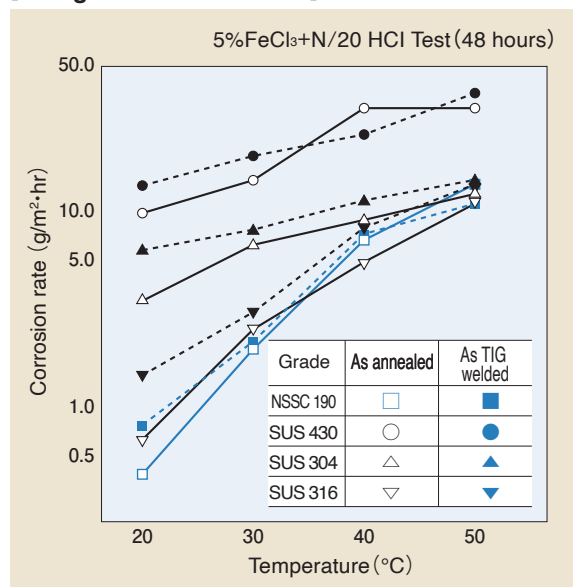
[Applications] Hot-water tanks, Solar collector panels, Water tanks

Characteristics

[Mechanical properties]

	Yield strength 0.2% offset N/mm ²	Tensile strength N/mm ²	Elongation %	Hardness HV
Specification	≥205	≥450	≥22	≤200
Typical values	358	533	29	172

[Pitting corrosion resistance]



[Stress corrosion cracking resistance]

(1) 42%MgCl₂ Solution(as annealed)

Grade	Load stress		Rupture time
	(Kgf/mm ²)	(N/mm ²)	
NSSC 190	27	265	No rupture after 1,000 hours
	30	294	"
	32	314	"
SUS 304	15	147	Rupture after 3 hours
	20	196	Rupture after 1 hours
SUS 316	15	147	Rupture after 7 hours
	20	196	Rupture after 4 hours

(2) High-temperature chloride solution

(Test conditions)

Pure water and NaCl(Cl⁻ concentration: 30,600ppm),300°C(853N/cm²)

Test piece:1mmt×15mmw×100mmL (10R U-Bend)

Judgment ○:No cracking ×:Cracking

Grade	Heat treatment	Cl ⁻ concentration	Cracking		
			100hr	200hr	300hr
NSSC 190	Anneal	30	○	○	○
		600	○	○	○
	Sens	30	○	○	○
		600	○	○	○
SUS 304	Anneal	30	○	○	○
		600	○	×	×
	Sens	30	○	○	×
		600	○	×	×
SUS 316	Anneal	30	○	○	○
		600	×	×	×
	Sens	30	○	○	○
		600	—	—	—

(Heat treatment)

Anneal: as annealed

Sensitizing conditions:NSSC 190 1200°C×5min, A.C.

SUS 304,316 650°C×2hr, A.C.

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