

Seawater corrosion resistance Super-ferritic stainless steel

Producing advantage:

Equipped with large-scale, advanced and high efficient equipments, used at power station condenser have superexcellent seawater corrosion resist properties.

Characteristic:

- High Cr and Mo added, the corrosion resist properties highly then regular ferritic stainless steel.
- The corrosion resist properties as same as Ti-TA2 or super austenitic stainless steel.
- Corrosion properties-pitting corrosion PRE= 39.
- Unsensitive of stress corrosion.

Conventional Products

Steel grade	Grade	Specifications (mm)		Weight MT	Standard	Application
		Thickness	Width			
400 series	TTS446	2B/2D Surface: 0.3-3.0mm BA surface: 0.2-1.5mm	2B/2D Surface: 1000-1280 1000-2000 BA surface: 1000-1500	6-15MT	JISG4305 GB/T 3280 Q/T 067-2012	seawater desalination, heat-exchanger

*Other sizes can be supply by request, BA surface width 1650mm Max.

Physical properties

Grade	Density (g/cm3)	Elastic modulus GPa	Linear expansion coefficient 10-6/K20-100C	Themnal conductivity W/m K 100C	J/Kg k Specific heat 20C	Magnetism
TTS446	7.75	214	9.54	17.8	500	yes

Chemical Composition: Mass Percentage (%)

Grade	C	Si	Mn	Cr	N	Ni	NborTi	Mo
Standard	0.03max	1.00max	1.00amx	25.0-28.0	0.04max	1.0-3.5	0.20-1.0	3.0-4.0
Testing	0.012	0.30	0.20	27.6	0.020	2.0	0.45	3.8



Mechanical Properties

Mechanical properties at ambient temperature

Grade	Yield strength RP0.2(MPa)	Tensile strength Rm(MPa)	Elongation A50(%)	Hardness HV5	Bending test
Standard	≥450	≥585	≥18	≤251	Qualified
Testing	≥575	≥680	26	205	Qualified

Welding Properties and Notice:

- Low carbon and Nitrogen, Cr and Mo added, high corrosion-resisted performance on welding parts.
- Difficult for Fusion welding and better for filler wire welding.
- Low thermal expansion coefficient-high heat conduction and small deformation after welding comparing with 304.
- Try to avoid heat inputting, otherwise result in bigger crystalline grain and influence the toughness of the plate.
- Gas protection: Argon protection is needed to avoid surface oxidation and nitriding.
- To Avoid the contamination of grease, otherwise carburization will occur.
- Better to use 309L or higher grade welding rod.

Research and Development Target

400 series will be our research and developing target in future. Super ferritic stainless steel will be highlight, and as the substitute of 304 for our aim on the direction of economic research and developing. Realize 439 and 443 product seriation, enlarge the application of decoration industry such as the decoration of outside roof and curtain wall. Develop the high-chromium ferritic stainless steel such as 445, 446M and so on to improve the application of 400 series.

Service Promise

- To provide consumers with the personalized designs on composition, properties, packing, coil weight and quality certificate.
- Technical support to customers in material selection fabrication.
- Accurate and prompt delivery
- Response to customer's claim within 24 hours.

Contact Us

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