

# TS-310

AWS A5.4 E310-16  
EN ISO 3581-B ES310-16  
JIS Z 3221 ES310-16

## Characteristics and Applications:

The weld metal of TS-310 is a full austenite structure (26.5Cr-1Ni). Heat resistance, corrosion resistance and toughness of TS-310 are excellent without the need of pre-heat and post-weld heat treatment. It is suitable for the welding of low-temperature service stainless steel, and applicable for AISI 310S. Proper base metals include stainless steel plate, steel strip, steel tube, seamless pipe, and steel bar.

## Notes on usage:

1. Clean up the contaminations on the base metal, groove and pass to pass with stainless steel brush.
2. Maintain short arc length. Moving range should be controlled within 2.5 times of the wire's dia when you are welding with weave method.
3. Dry the electrodes at 250~300°C for 60 minutes before using. Take out consumables for half day consumption and keep in the environment at 100~150°C during welding process.
4. Due to intensive content of Cr and Ni, note to play stick with single acting method and lower current and keep inter-pass temperature under 150°C with single-acting process to prevent from cracking.

## Typical chemical composition of weld metal (wt%):

	C	Mn	Si	P	S	Cr	Ni
AWS	0.08-0.20	1.0-2.5	≤0.75	≤0.03	≤0.03	25.0-28.0	20.0-22.5
EN ISO	0.08-0.20	1.0-2.5	≤0.75	≤0.03	≤0.03	25.0-28.0	20.0-22.5
Typical value	0.10	1.80	0.30	0.028	0.007	26.2	20.8

## Typical mechanical properties of weld metal:

	Tensile strength MPa(ksi)	Elongation %
AWS	≥550(80)	≥30
EN ISO	≥550(80)	≥25
Typical value	590(86)	34

## Welding position:



## Sizes and recommended current range (AC or DC<+>):

Diameter (mm)	2.6	3.2	4.0	4.8	
Length (mm)	300	350	350	350	
Amps	F	60-90	80-130	130-170	180-210
	V&OH	50-70	70-110	100-130	-

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