

# TWE-811Ni1

AWS A5.29 E81T1-Ni1C  
EN ISO 17632-A-T 46 3 1Ni P C1 1 H10

## Characteristics and Applications:

TWE-811Ni1 is a titania type flux-cored wire with CO<sub>2</sub> shielding gas for all-position welding. It is designed for welding 590 N/mm<sup>2</sup> high tensile steel used in low temperatures.

It provides good weldability with smooth bead appearance, less spatter and stable arc as well as good impact properties down to -30°C.

It is also suitable for welding on construction machinery, shipbuilding, offshore, structures, bridges, storage tanks and piping.

## Notes on usage:

1. Excessive heat input should reduce impact value. Therefore, perform welding with selecting proper heat input based on the required impact value.
2. Must preheat at 50~150°C depending on steels, plate thickness and restraint.
3. Use DC(+) polarity.
4. Use 99.8% or higher purity of CO<sub>2</sub> Gas.
5. Keep the product dry, while it is stored or delivered.

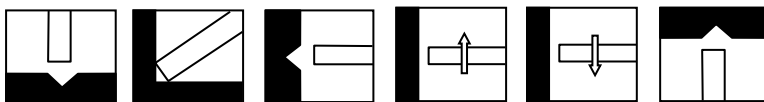
## Typical chemical composition of weld metal (wt%):

	C	Mn	Si	P	S	Ni
AWS	≤ 0.12	≤ 1.50	≤ 0.80	≤ 0.030	≤ 0.030	0.80-1.10
EN ISO	-	≤ 1.4	≤ 0.80	-	-	0.6-1.2
Typical value	0.04	1.20	0.25	0.015	0.009	1.00

## Typical mechanical properties of weld metal:

	Yield strength MPa(ksi)	Tensile strength MPa(ksi)	Elongation %	Charpy V-Notch J(ft-lbf)	
AWS	≥ 470(68)	550-690(80-100)	≥ 19	-30°C (-20°F)	≥ 27(20)
EN ISO	≥ 460(67)	530-680(77-99)	≥ 20	-30°C (-20°F)	≥ 47(35)
Typical value	602(87)	650(94)	26	-30°C (-20°F)	110(81)
				-40°C (-40°F)	95(70)

## Welding position:



## Sizes and recommended parameter range (DC <+>):

Stick out:15-25(mm), flow rate:20-25(l/min):

Position	Diameter (mm)	1.2	1.4	1.6
	F、HF		180A-300A / 24V-36V	180A-350A / 24V-36V
VU、OH		150A-220A / 22V-28V	150A-220A / 22V-28V	160A-280A / 22V-28V
H		150A-260A / 22V-31V	160A-280A / 22V-30V	180A-400A / 28V-42V

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