

TWE-81K2

AWS A5.29 E81T1-K2C
EN ISO 17632-A-T 46 6 1.5Ni P C1 1 H5

Characteristics and Applications:

TWE-81K2, a titania type flux-cored wire, is designed for welding 560N/mm² high tensile steel for low temperatures. The weld metal contains about 1.5%-Ni and makes good notch toughness at temperatures down to -60°C under as-welded condition.

It provides excellent usability with stable arc and efficiency in all-position welding.

It is suitable for butt or fillet welding of offshore structures for low-temperature districts, LNG and LPG carriers, and storage tanks, etc.

Notes on usage:

1. When the heat input is excessive, the impact value tends to be reduced. Therefore, perform welding with selecting proper heat input depending on the required impact value.
2. Use DC(+) polarity.
3. Use 99.8% or higher purity of CO₂ gas.

Typical chemical composition of weld metal (wt%):

	C	Mn	Si	P	S	Ni
AWS	≤0.15	0.5-1.75	≤0.80	≤0.030	≤0.030	1.00-2.00
EN ISO	-	≤1.6	-	-	-	1.2-1.8
Typical value	0.04	1.08	0.26	0.013	0.006	1.50

Typical mechanical properties of weld metal:

	Yield strength MPa(ksi)	Tensile strength MPa(ksi)	Elongation %	Charpy V-Notch J (ft-lbf) -60°C (-76°F)
AWS	≥470(68)	550-690(80-100)	≥19	≥27(20)
EN ISO	≥460(67)	530-680(77-99)	≥20	≥47(35)
Typical value	565(82)	615(89)	27	100(74)

Welding position:



Sizes and recommended operating range (DC <+>):

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

Position	Diameter(mm)	1.2	1.6
	F、HF		180-300A / 24V-34V
VU、OH		150-220A / 23V-28V	160-220A / 22V-26V

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