

# 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 560 N/mm<sup>2</sup> 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 CO<sub>2</sub> gas.

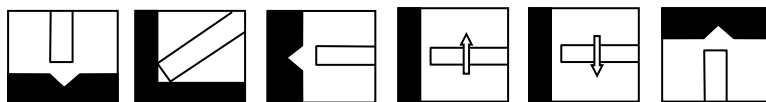
## Typical chemical composition of weld metal (wt%):

	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	580(84)	635(92)	26	75(60)

## 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	200-350A / 24V-32V
VU、OH	150-220A / 23V-28V	160-220A / 22V-26V	

\* The information contained or otherwise referenced herein is presented only as "typical" without guarantee or warranty, and TienTai Electrode Co., Ltd. expressly disclaims any liability incurred from any reliance thereon. Typical data is obtained when welded and tested in accordance with AWS specification. Other tests and procedures may produce different results. No data is to be construed as recommendation for any welding condition or technique not controlled by TienTai Electrode Co., Ltd.