

# TFW-625

AWS A5.34 ENiCrMo3T1-4

## Characteristics and Applications:

TFW-625 is the rutile high nickel alloy flux cored wire. Applicable for Inconel 625, dissimilar welding, 5% Ni and 9% Ni plate low temperature tank welding with a good welding slag detachability, stable arc, minor spatter and good heat resistance. It has good impact toughness at -196 ° C, excellent corrosion resistance and oxidation resistance, especially resistance to corrosion and chloride-induced stress corrosion cracking.

Application include furnace equipment, petrochemical, power plants, marine and marine environments, LNG (liquefied natural gas) storage tank.

## Notes on usage:

1. Moisture, rust stains, oil containment on the base metal must be fully removed before welding to prevent the formation of porosity and cracks.
2. Use 80% Ar + 20% CO<sub>2</sub> shielding gas.
3. Keep shielding gas rate at 15-25 l/min. The best gas flow rate is 20 l/min.
4. Preheating is not required. Inter-pass temperature at 80°C~100°C.
5. Transport and storage should pay attention to moisture.

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

	C	Mn	Si	P	S	Cr	Ni	Mo	Fe	Nb+Ta	Cu
AWS	≤0.10	≤0.50	≤0.50	≤0.02	≤0.015	20.0-23.0	≥58.0	8.0-10.0	≤5.0	3.15-4.15	≤0.50
Typical value	0.021	0.262	0.46	0.005	0.001	21.87	63.70	8.62	0.93	3.67	0.020

## Typical mechanical properties of weld metal:

	Yield strength MPa(ksi)	Tensile strength MPa(ksi)	Elongation %	Charpy V-Notch J (ft-lbf) -196°C (-320°F)
AWS	-	≥ 690(100)	≥ 25	-
Typical value	500(73)	790(115)	36	70(52)

## Welding position:



## Size and recommended parameter range (DC<+>)

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

Position	Diameter (mm)	1.2
F, HF		180A-200A/26V-28V
H		180A-200A/26V-28V
V-UP		130A-150A/23V-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.