

TFW-625

AWS A5.34 ENiCrMo3T1-1/4

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 100% CO₂ or 80% Ar + 20% CO₂ 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.

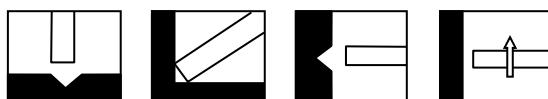
Typical chemical composition of weld metal (wt%):

	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)	
F, HF		1.2
H		180A-200A/26V-28V
V-UP		130A-150A/23V-26V

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