TNM-10

AWS A5.11 ENiCrMo-3
EN ISO 14172-E Ni 6625
JIS Z 3224 DNiCrMo-3

Characteristics and Applications:

TNM-10 is a nickel based low hydrogen type covered electrode (for DC) containing 60Ni, 22Cr, 5Fe, 9Mo, 3.5Nb. The product provides excellent heat and corrosion resistance. It is widely used for chemical plant, nuclear reactor, Inconel 625, 9%Ni steel and dissimilar metals welding. All-position welding is available for stick electrodes with a diameter of ¢3.2(mm) or less in size. Proper base metals are also including ASTM B443/444/446, Incon 625/825/Alloy20/Alloy25-6Mo, Monel400.

Notes on usage:

1. Be sure to clean up the contaminations on the base metal, groove and pass to pass with stainless steel brush.
2. Dry the electrodes at 350~400℃ for 60 minutes before using if moisture pick-up of flux is suspected. Take out a batch of half day consumption and keep at 100~150℃ during welding process.
3. Use back-step method to prevent arc starting from blowholes and hold for 3-5 seconds at every end-up.
4. Maintain short arc length to prevent porosity problem.
5. Do not exceed the range of recommended current. Over heat input might decrease the impact value.
6. It is hard to proceed by overhead or vertical position, flat position in stead is recommended.

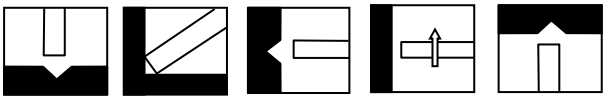
Typical chemical composition of weld metal (wt%):

	C	Mn	Si	P	S	Cr	Ni	Nb	Fe	Mo	Cu
AWS	≦0.10	≦1.0	≦0.75	≦0.03	≦0.02	20.0-23.0	≧55.0	3.15-4.15	≦7.0	8.0-10.0	≦0.50
EN ISO	≦0.10	≦2.0	≦0.8	-	-	20.0-23.0	≧55.0	3.0-4.2	≦7.0	8.0-10.0	≦0.5
Typical value	0.025	0.04	0.30	0.01	0.003	21.3	64.78	3.30	0.94	9.20	0.033

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	-	≧760(110)	≧30	-
EN ISO	≧420(61)	≧760(110)	≧27	-
Typical value	530(77)	791(114)	43	42(53)

Welding position:



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

Diameter (mm)		3.2	4.0
Length (mm)		350	350
Amps	F	70-110	90-140
	V & OH	70-100	100-130

* 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.

COVERED ELECTRODES

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