KW-A625

COVERED ELECTRODE

FOR NICKEL ALLOY

KISWEL

KW-A625

■ Description

- **Covering is lime titania type for welding of Inconel 625, Incoloy 825 and other molybdenum containing stainless steel**
- **The electrodes provide excellent operability for groove and fillet welding in the down hand position**
- **Easy slag removal, low spatter generation and stable arc characteristics**
- **Redry the electrode at 250~350℃ for 30~60 minutes prior to use**

■ Classification

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

■ Welding Position

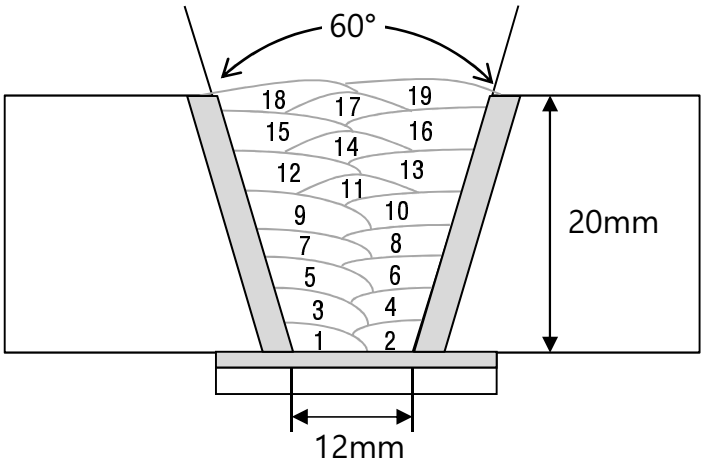


■ Base Materials

1.4529 X1NiCrMoCuN25-20-6 , 1.4539 X1NiCrMoCu25-20-5
1.4547 X1CrNiMoCuN20-18-7, 1.4558 X2NiCrAlTi32-20
1.4859G-X10NiCrNb32-20, 1.4876 X10NiCrAlTi32-20
2.4618 NiCr22Mo6Cu, 2.4619 NiCr22Mo7Cu
2.4641 NiCr21Mo6Cu, 2.4660 NiCr20CuMo, 1.5680 12Ni19, X12Ni5
1.563710Ni14 (3.5%Ni) 1,5662 X8Ni9(9%Ni), 1,5662 X8Ni9(9%Ni)

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■ All Weld Metal Test Specimen



Base metal	A36 (Buttering)
Size	4.0*350mm
Polarity / Current	DC+ / 145~150A
Welding Position	PA / 1G
Heat Input	8.8~11.7 kJ/cm

■ Typical Mechanical Properties of Weld Metal

	Y.S (MPa)	T.S (MPa)	El. (%)	I.V (J) (J @ Temp.)	PWHT	Remark
AWS Spec.	-	≥760	≥30	-	A.W	1G
KW-A625	500	770	40	62 @ -196℃	A.W	

■ Typical Chemical Composition of Weld Metal (%)

	C	Si	Mn	P	S	Fe
AWS Spec.	≤0.10	≤0.75	≤1.0	≤0.03	≤0.02	≤7.0
KW-A625	0.02	0.35	0.61	0.009	0.006	1.69
	Cr	Mo	Cu	Ni	Nb+Ta	
AWS Spec.	20.0~23.0	8.0~10.0	≤0.50	≥55.0	3.15~4.15	
KW-A625	21.81	8.43	0.01	Rem.	3.38	

■ Weldability

		Flat, H-Fillet	V-Up
Arc	Stability	Excellent	Good
	Concentration	Good	Good
	Force	Good	Good
Slag	Fluidity	Excellent	Good
	Removability	Good	Good
Spatter	Quantity	Excellent	Good
Fume	Quantity	Good	Good
Porosity	Occurrence	Good	Good

■ Bead Appearance











1G, 4.0*350mm, DC+ 150~155A

■ Welding Efficiency

Nominal electrode efficiency (%)	Deposition efficiency (%)
85~90	55~60

1) Size : 3.2*350mm

2) Nominal electrode efficiency (%) : M_D/M_{CN} *100

3) Deposition efficiency (%) : $M_D/(M_E-M_S)$*100

* M_D : mass of deposited weld metal
* M_{CN} : nominal mass of consumed core wire
* M_E : total mass of electrodes tested
* M_S : total mass of the stub ends

■ Pitting Corrosion Test Result

ASTM G48-11(Method A)	Result
Ferric Chloride Pitting Test - Weight Loss	0.2g/㎡
Ferric Chloride Pitting Test - Visible Pitting(20×)	No Defects

* Test time(h) : 72 , Test Temperature(℃) : 50±1, Test solution : about 6% FeCl3

■ Recommended Welding Parameter (DC+)

Diameter (mm)	2.5 / 2.6	3.2	4.0	5.0
Length (mm)	300	350	350	350
Flat, Fillet	55~80	90~130	110~150	140~180
V-Up	40~60	70~90	90~130	-

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■ Packaging and Available sizes



Diameter (mm)		2.5 / 2.6	3.2	4.0	5.0
Length (mm)		300	350	350	350
Plastic tube	Inner	2, 5Kg			
	Out	20Kg (2Kg x 10EA, 5Kg x 4EA)			
Vacuum	Inner	2Kg			
	Out	10Kg (2Kg x 5EA)			

* Identification Imprint : ENiCrMo-3 KISWEL

* Tip Color : None

■ Approval

DNV・GL
For NV 1.5Ni, NV 3.5Ni, NV 5Ni and 9Ni. Test temp. -196℃

* Remark : CE

■ Control Instruction

1. Storage

1) On principle covered electrodes should be in their original packaging until used. If possible the packs of electrodes should be taken out of storage in the sequence in which they were received in warehouse.
2) The covered electrodes must be stored in dry rooms to protect them against damage caused by moisture. The room must be fitted out with pallets or shelves since storage directly on the floor or against the walls is not recommended.
3) Opened packs of electrodes should also be stored in dry and, if necessary, heated rooms so that there is no likelihood of the temperature dropping below the dew point.

AWS Classification	Store Condition (Opened packs of electrode)	
	Ambient Air	Holding Oven
ENiCrMo-3	Not recommended	High 30~140℃ than room temperature

2. Re-drying

1) Where electrodes have become damp it is recommended that re-drying is carried out immediately prior to welding in accordance with the temperature details specified in the following table.
2) Electrodes that have been in direct contact with water, grease or oil should not be used for welding fabrication.

Type of coating	Re-drying temp. (℃)	Re-Drying time (min)
Lime titania	250~350	30~60

KISWEL

The Management System of KISWEL LTD, 704, Gongdan-ro, Seongsan-gu, Changwon-si, Gyeongnam 51544, Republic of Korea, 70, Saebyeok-ro 63beon-gil, Sasang-gu, Busan 47018, Republic of Korea has been approved by Lloyd's Register Quality Assurance to : IATF 16949:2016, ISO 14001:2015, applicable to : Manufacture of solid welding wires & rods, flux cored wires, submerged arc welding wires & fluxes, stainless steel welding wires & rods and covered electrodes.
More information : www.kiswel.com

