

OK 92.05

Type Lime-basic

SMAW

ENi-1

Description

OK 92.05 is a stick electrode for joining commercial pure nickel in wrought and cast forms. It can also be used to join dissimilar metals such as nickel to steel, nickel to copper and copper to steel. Moreover, this electrode can be used for surfacing steel.

Welding recommendations:

To avoid weld metal defects, it is important that the welding zone is thoroughly cleaned and free from oxides. Machining, grinding, grit blasting or pickling are ways of doing this. Brushing is not advisable.

The high nickel weld metal of OK 92.05 has reduced wettability compared with steel weld metal. However, this should not be compensated for by increasing the welding current so that it exceeds the recommended maximum limit for the electrode. This may lead to the loss of deoxidisers and the subsequent formation of pores.

The weaving technique is generally desirable.

The opening angle for joints should be between 80-90°C.

Machinability: good

Redrying the electrodes: 250°C, 2 h

Welding current

DC+



Classifications

SFA/AWS A5.11 ENi-1
EN ISO 14172 E Ni 2061 (NiTi3)

Typical all weld metal composition, %

C	Si	Mn	Ni	Cu	Al	Ti	Fe
0.04	0.7	0.4	>92.0	<0.2	<0.1	1.5	0.4

Typical mech. properties all weld metal

Yield stress, MPa	330
Tensile strength, MPa	470
Elongation A5, %	30

Welding parameters

Diameter, mm	Length, mm	Welding current, A	Arc voltage, V	N. Kg weld metal/kg electrodes	B. No. of electrodes/kg weld metal	H. Kg weld metal/hour arc time	T. Burn-off time, s/ electrode
2.5	300	70-95	23	0.55	96	0.8	47
3.2	350	90-135	25	0.55	53	1.2	56
4.0	350	120-180	27	0.45	42	1.5	59