

Copper/Aluminum Electrodes

Copper/aluminum/iron electrodes in a ship's marine growth prevention system are key components that protect the vessel's seawater systems from marine organism attachment and corrosion. The copper electrode electrolytically releases trace copper ions (Cu^{2+}), which effectively kill or inhibit marine organism larvae and spores. The aluminum or iron electrode electrolytically produces flocculant aluminum hydroxide or ferric hydroxide, which adheres to the pipe walls to form a protective film, serving both anti-fouling and anti-corrosion purposes. If the seawater piping material is steel, a copper/aluminum anode combination is typically selected; if the material is copper or aluminum, a copper/iron anode combination is used.

■ PRODUCT SPECIFICATIONS

Electrode Material: Copper/Aluminum

Product Size(mm): $\Phi 75 \times 350$

$\Phi 80 \times 450$

$\Phi 120 \times 600$

Cable: $2 \times 1.5 \text{mm}^2$

Flange: Carbon steel

Copper Electrode Composition(%):

Sn: ≤ 0.002

Zn: ≤ 0.005

Pb: ≤ 0.005

Other: ≤ 0.088

Cu: Remainder

Aluminum Electrode Composition(%):

Si: 0.7-1.3

Fe: ≤ 0.05

Cu: ≤ 0.1

Mn: $\leq 0.4-1.0$

Mg: $\leq 0.6-1.2$

Cr: ≤ 0.25

Zn: ≤ 0.2

Ti: ≤ 0.1

Other: 0.05-0.15

Al: Remainder

