BASENNOVA

PRODUCT DATA SHEET

Condenser Aluminum Anode

Condenser aluminum anodes typically utilize an Al–Zn–In activating formulation (with trace additions of Sn/Cd/Mg). They function by forming and maintaining an activatable surface in seawater/brackish water, operating at a stable potential of approximately –1.05 to –1.10 V (vs. CSE) as a sacrificial anode. Through micro-cell current, they polarize carbon steel tube sheets/water chambers into the protective range, mitigating pitting and crevice corrosion. Characterized by high capacitance, low density, and high output per unit mass (lightweight), they are well-suited for seawater/brackish water cooling systems with high conductivity, enabling efficient multi-point deployment and long-term maintenance for large-scale condensers.

KEY FEATURES

1.Highest current output per unit weight
2.Lightweight, ideal for large marine structures
3.Moderate driving voltage, safer operation
4.Relatively controllable cost, suitable for mass production of large castings
5.Stable potential in seawater and brine

PRODUCT SPECIFICATIONS

Shape: Rod / Round bar / Ring / Plate (customizable)
Length: 200 mm - 1000 mm
Width / Diameter: 50 mm - 200 mm
Steel Core: Diameter 5 - 20 mm, material: low carbon steel
Mounting Type: Welded / Threaded / Bracket mounted

Chemical Composition(%)			
Executive Standard	**DNV RP B401**	**GB/T4948-2025:A21**	**BS EN12496-2013: A3**
Zn	2.5-5.75	4.0-7.0	4.75-5.75
In	0.015-0.040	0.020-0.050	0.016-0.020
Cd	≤0.002	/	≤0.002
Si	≤0.12	≤0.10	0.08-0.12
Cu	≤0.003	≤0.01	≤0.003
Fe	≤0.09	≤0.15	≤0.06
Mg	/	0.50-1.50	/
Ti	/	0.01-0.08	/
Other	≤0.10	/	/
Each Impurity	/	/	≤0.02
Total Impurity	/	/	≤0.05
Al	Remainder	Remainder	Remainder

Electrochemical Property			
Executive Standard	**DNV RP B401**	**GB/T4948-2025:A21**	**BS EN12496-2013:A3**
Open Potential(-V,vs SCE)	/	1.10-1.18	/
Closed Potential(-V,vs SCE)	≥1.05	1.05-1.12	1.05-1.12
Actual Capacitance(A·h/kg)	≥2500	≥2600	≥2500
Current Efficiency(%)	/	≥90	/