

Aluminum Anode for Seawater Cooling Water Systems

Aluminum Anode for Seawater Cooling Water Systems (Al-Zn-In series) utilizes seawater as a strong electrolyte, allowing the more negative aluminum anode to form a galvanic couple with the protected carbon steel/copper alloy piping, valves, pump casings, heat exchanger water chambers, etc. The aluminum dissolves preferentially (sacrificial), continuously delivering protective current to the steel/copper surface, shifting the potential into a safe range, thereby suppressing uniform corrosion, crevice corrosion, and localized pitting under deposits.

It is widely used in coastal power plants, refineries/terminals, LNG facilities, naval vessels, and other open-intake or semi-closed seawater cooling circuits, applied to inlet straight pipes, elbows, gate valve bodies/seats, expansion joints, strainer housings, bellows, etc.



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

APPLICATIONS

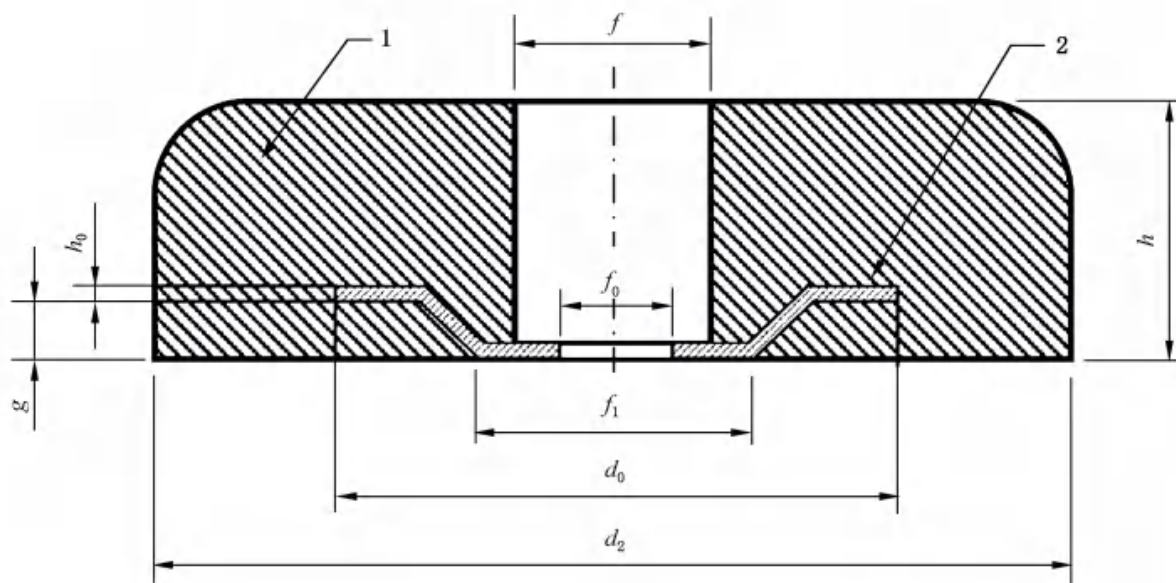
- 1.Coastal power plants
- 2.Refineries/terminals
- 3.LNG facilities
- 4.Naval vessels

PRODUCT SPECIFICATIONS

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	/

PRODUCT GUIDE



1--Anode body

2--Flat steel feet

Type	Anode body size/mm		Size of iron feet/mm					N.W. kg	G.W. kg
	$d_1 \times h$	f	d_0	f_0	f_1	g	h_0		
EY-01	300 × 60	40	80	12	50	6-8	4	11.3	11.5
EY-02	360 × 40	50	100	14	70	5-6	4	8.8	9.0
EY-03	300 × 40	40	80	12	50	5-6	4	7.3	7.5
EY-04	200 × 50	35	75	10	45	5-6	4	3.8	4.0
EY-05	180 × 50	35	75	10	45	5-6	4	3.3	3.5
EY-06	120 × 100	30	75	10	45	8-10	4	2.3	2.5