
Low-resistance hull system

▶ Rudder bulbs System introduction

Rudder bulbs are streamlined flow-guiding devices installed at the leading edge of the rudder body, directly facing the propeller shaft. They usually have spherical or ellipsoidal structure, with their centerline coinciding with the propeller axis. The core principle is to block the formation path of the boss vortex, convert rotational kinetic energy into axial thrust, and improve the uniformity of the inflow to the rudder body, thereby reducing turbulence and separated vortices.

▶ System composition

Mechanical structure: made of high-strength corrosion-resistant alloys (such as nickel-aluminum bronze, stainless steel);



▶ Advantages and characteristics

Energy saving and consumption reduction: Achieves an average energy saving of 0.3-2% per unit

High adaptability: Suitable for installation in both newbuilds and existing vessel retrofits, especially suitable for low-speed commercial ships.

Vibration reduction: mitigates the pulsation of the propeller wake and reduces hull structural fatigue.

▶ Application scenarios

It is applicable to both new ships and retrofits of old ships, and is effective for various ship types such as LNG carriers, bulk carriers, and container ships.