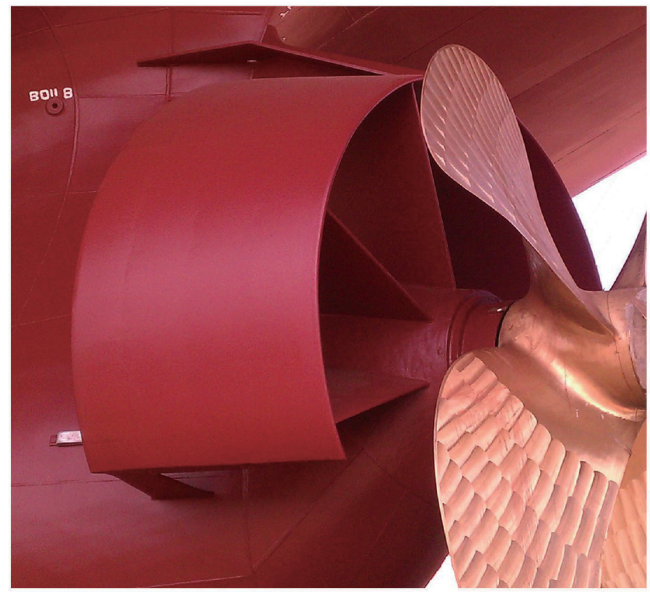
Low-resistance hull system

Pre-shrouded ducts System introduction



The pre-shrouded ducts are a type of hydrodynamic energy-saving device installed in front of the ship's propeller, which improves propulsion efficiency by optimizing the propeller's inflow field. The core principle of the device lies in the design of guide vanes with counter-rotating direction, which induce pre-swirl in the water flow entering the propeller. This pre-swirl flow is opposite to the direction of the propeller's rotation, significantly reducing the rotational energy loss in the propeller's wake. At the same time, the duct rectifies the inflow across the upper half plane of the propeller, improving water flow uniformity and reducing turbulence and vortex.

System composition

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

Advantages and features

Energy saving and consumption reduction: Achieves an average energy saving of 3-5% per unit

Simple structure and convenient installation: Can be integrated into new ships during the design phase; for old ship retrofits, it can be quickly installed through positioning marks during docking.

Outstanding economy: rapid return on investment and low annual maintenance costs.

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.