海航前置导轮

IGVS Inlet Guided Vane with Shroud

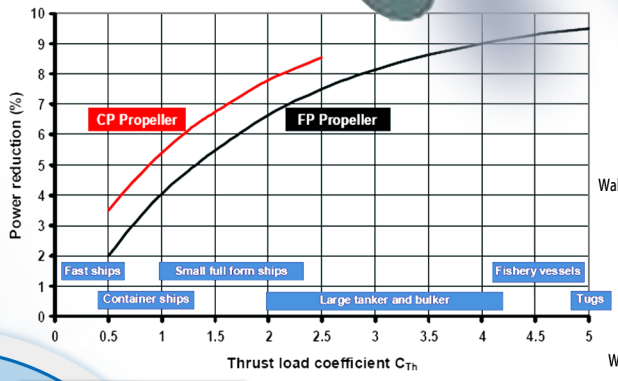
设计流程

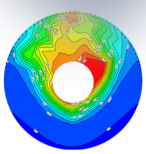
船型输入
输入船体尾部线型和螺旋桨参数

尾流评估
评估前置导轮几何参数：根据输入船体尾部线型和螺旋桨计算
通过数值水池评估船舶安装导轮后节能效果

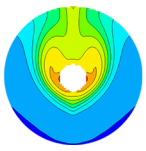
节能导轮设计
在确定导轮方案上完成结构设计和建模、有限元强度分析

导轮振动模态评估
评估前置导轮干湿模态，避免引起共振



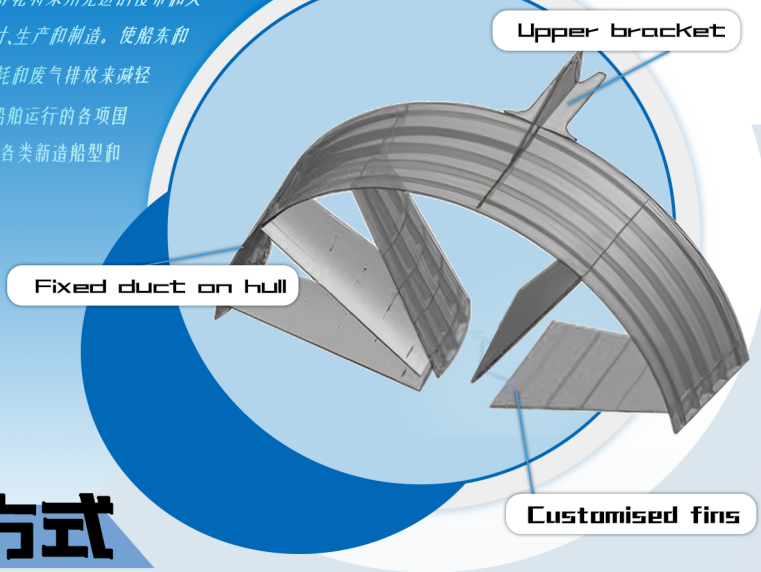


Wake at Propeller plane（without PSN）



Wake at Propeller plane（with PSN）

海航前置导轮将采用先进的技术和尖端的设备进行设计、生产和制造。使船东和运营商通过减少油耗和废气排放来减轻环境的污染，从而达到船舶运行的各项国际环保要求指标。适用于各类新造船型和优化改造船舶。



我们的优势

节能收益

- 一至二年内即可收回投资成本
- 预计节省5%到10%到燃料
  - ▼油船和散货船最大可达10%
  - ▼集装箱船，节能效果4%
- 通过提升运营效率、追求环保卓越、实现燃料灵活

专业高效

- 自主设计——生产制造——安装服务
- 超过二十年船用产品专业设计经验博士团队
- 高质量生产流程专业生产制造
- 安装服务团队提供24/7全天候支持服务

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海航前置导轮

IGVS Inlet Guided Vane with Shroud

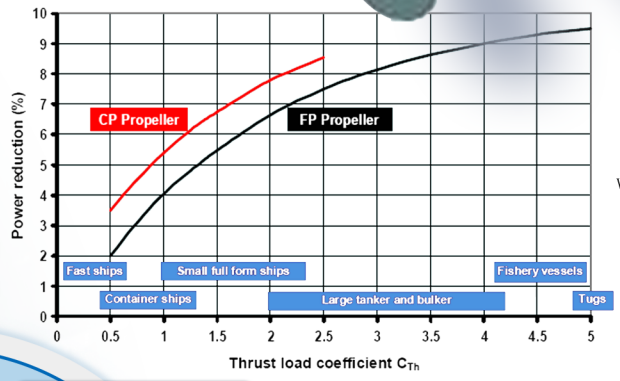
Design Process

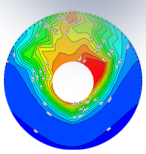
Input the vessel info
Input the boat stern contour and the propeller parameters

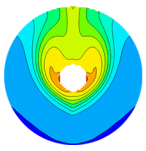
Wake Assessment
Assessing the geometric parameters of the PSN: Calculate according to the boat stern contour and the propeller parameters.
Assessing the energy-saving effects of installing PSN on ships using numerical tank simulations

Evaluation of vibration modes of IGVS
Evaluating the dry and wet modes of the PSN to avoid resonance

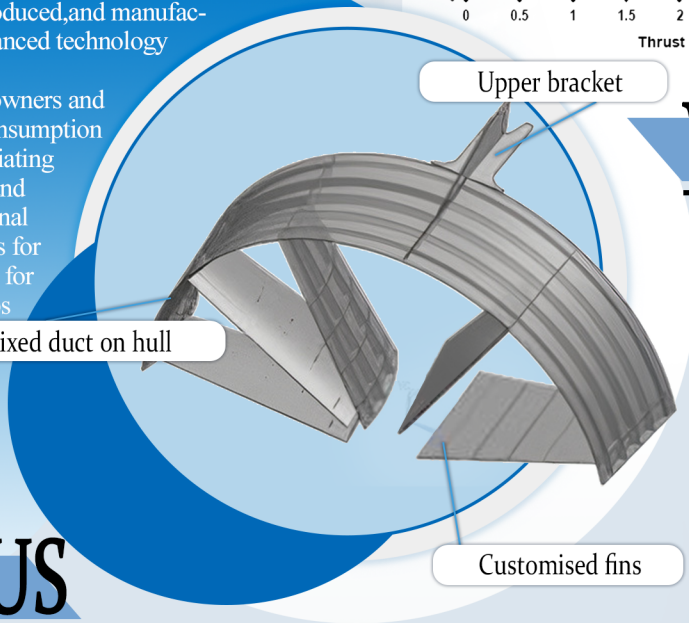
Energy-saving IGVS Design
Energy-saving PSN Design Structural design, modeling, and finite element strength analysis are completed for the chosen PSN.




Wake at Propeller plane(without IGVS)


Wake at Propeller plane(with IGVS)

The IGVS will be designed, produced,and manufactured using advanced technology and equipment.
This will enable shipowners and operators to reduce fuel consumption and emissions, thus alleviating environmental pollution and meeting various international environmental requirements for ship operation. It is suitable for all types of newly built ships and optimized retrofit vessels.



Why Us

Cost Saving & Benifits

- The investment cost can be recovered within one to two years
- Expected fuel savings range from 5% to 10%
  - ▼Tankers and bulk carriers can achieve fuel savings of up to 10%
  - ▼For container ships, the energy-saving effect is expected to be around 4%
- Achieving fuel flexibility through improved operational efficiency and pursuing environmental excellence

Professional and Efficient

- In-house design, manufacturing, installation, and service
- Over twenty years of professional design experience PhD team in marine products
- Manufacturing with high-quality production processes
- 24/7 service support team

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