



上海宸宇凡实业发展有限公司
CHIEF INDUSTRY LIMITED

上海宸宇凡实业发展有限公司 Chief Industry Limited

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目录 / DIRECTORY

公司介绍 ABOUT US	02
压载水处理系统一站式服务 One-stop service for BWTS	05
欧盟EUA开户及碳交易 EU EUA account opening and carbon trading	07
船舶能效管理计划编制与自动化监测 SEEMP(EU-MRV & IMO-DCS)	09
碳强度等级提升产品方案 CII Rating Enhancement	13

公司介绍

上海宸宇凡实业发展有限公司是以压载水处理系统业务为基础的综合性船舶服务公司。公司坚守“服务.创新.共赢”的企业精神,持续深耕于船舶行业,以优质的产品与服务赢得越来越多船东与市场的认可。

“持续优化低碳方案”为我们的发展愿景。我们一直在向着低碳环保的方向发展,积极响应绿色船舶的要求,在船舶能效和脱碳等业务方面开拓、创新!

公司与业内知名高等院校、科研机构相合作,展开产学研结合。在市场引导下,在碳相关领域不断研究探索、推陈出新,推出适合市场需求的、优质高效的产品。

ABOUT US



Chief Industry Limited is a comprehensive ship service company based on ballast water treatment system business. The company adheres to the enterprise spirit of "service, innovation and win-win", continues to cultivate in the ship-building industry, and wins more and more recognition from shipowners and the market with high-quality products and services.

"Continuously optimize low-carbon solutions" is our development vision. We have been developing in the direction of low-carbon environmental protection, actively responding to the requirements of green ships, And exploring and innovating in the aspects of ship energy efficiency and decarbonization!

Guided by market demands, we innovate in carbon-related fields, delivering high-quality, efficient products tailored to market needs

企业资质 Certificate

标服认证

质量管理体系认证证书

兹证明
上海宸宇凡实业发展有限公司

统一社会信用代码/组织机构代码证: 91310112062588763J
注册地址: 上海市闵行区光华路2118号第3幢2层2004室
经营地址: 上海市嘉定区南翔镇南翔工业园区F座302室

建立的管理体系, 按照以下标准评审合格, 特发此证。

认证标准
GB/T 19001-2016/ISO 9001:2015

认证范围:
船舶配件的销售

证书号: 41622010744805
颁证日期: 2022年11月27日
有效期至: 2025年11月26日

杭州标服认证有限公司

总经理: [Signature]

标服认证

环境管理体系认证证书

兹证明
上海宸宇凡实业发展有限公司

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认证标准
GB/T 24001-2016/ISO 14001:2015

认证范围:
船舶配件的销售销售及场所的相关环境管理活动

证书号: 4162201060805
颁证日期: 2022年11月27日
有效期至: 2025年11月26日

杭州标服认证有限公司

总经理: [Signature]

标服认证

职业健康安全管理体系认证证书

兹证明
上海宸宇凡实业发展有限公司

统一社会信用代码/组织机构代码证: 91310112062588763J
注册地址: 上海市闵行区光华路2118号第3幢2层2004室
经营地址: 上海市嘉定区南翔镇南翔工业园区F座302室

建立的管理体系, 按照以下标准评审合格, 特发此证。

认证标准
GB/T 45001-2020/ISO 45001:2018

认证范围:
船舶配件的销售销售及场所的职业健康安全活动

证书号: 4162201060805
颁证日期: 2022年11月27日
有效期至: 2025年11月26日

杭州标服认证有限公司

总经理: [Signature]

BFRZ

QUALITY MANAGEMENT SYSTEM CERTIFICATE

This is to hereby certify that the organization
Chief Industry Limited

Unified social credit code / Organization code: 91310112062588763J
Registered address: Room 2004, Building 3, Guanghua Road, Minhang, Shanghai, China
Business address: Room 302, F. No. 508, Xiangjiang Road, Jiading Area, Shanghai, China

Has been assessed to comply with the requirements of the international standard
GB/T 19001-2016/ISO 9001:2015

Certification scope:
The sale of ship accessories

证书号: 41622010744805
颁证日期: 2022年11月27日
有效期至: 2025年11月26日

Bangzhou Standard Service Certification Co., Ltd.

General Manager: [Signature]

BFRZ

ENVIRONMENT MANAGEMENT SYSTEM CERTIFICATE

This is to hereby certify that the organization
Chief Industry Limited

Unified social credit code / Organization code: 91310112062588763J
Registered address: Room 2004, Building 3, Guanghua Road, Minhang, Shanghai, China
Business address: Room 302, F. No. 508, Xiangjiang Road, Jiading Area, Shanghai, China

Has been assessed to comply with the requirements of the international standard
GB/T 24001-2016/ISO 14001:2015

Certification scope:
The sale of ship accessories related to the site of the relevant environmental management activities

证书号: 4162201060805
颁证日期: 2022年11月27日
有效期至: 2025年11月26日

Bangzhou Standard Service Certification Co., Ltd.

General Manager: [Signature]

BFRZ

OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM CERTIFICATE

This is to hereby certify that the organization
Chief Industry Limited

Unified social credit code / Organization code: 91310112062588763J
Registered address: Room 2004, Building 3, Guanghua Road, Minhang, Shanghai, China
Business address: Room 302, F. No. 508, Xiangjiang Road, Jiading Area, Shanghai, China

Has been assessed to comply with the requirements of the international standard
GB/T 45001-2020/ISO 45001:2018

Certification scope:
The sale of ship accessories related to the site of occupational health and safety management activities

证书号: 4162201060805
颁证日期: 2022年11月27日
有效期至: 2025年11月26日

Bangzhou Standard Service Certification Co., Ltd.

General Manager: [Signature]

华大信用评级
HUA DA CREDIT RATING

企业信用评价AAA级信用企业

ENTRPRISE CREDIT EVALUATION

上海宸宇凡实业发展有限公司

证书编号: H020230100021
Certificate Number: H020230100021
颁证日期: 2023.1.9
Date of Issue: 2023.1.9
有效期至: 2024.1.8
Date of Expiry: 2024.1.8
公示网址: www.huadacredit.com
Displaying Website: www.huadacredit.com

华大信用评级有限公司
www.huadacredit.com

华大信用评级
HUA DA CREDIT RATING

诚信经营示范企业

ENTRPRISE OF INTEGRITY MANAGEMENT DEMONSTRATION ENTERPRISE

上海宸宇凡实业发展有限公司

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华大信用评级有限公司
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华大信用评级
HUA DA CREDIT RATING

企业资信等级证书

CERTIFICATE OF ENTERPRISE CREDIT RATING

上海宸宇凡实业发展有限公司

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华大信用评级有限公司
www.huadacredit.com

华大信用评级
HUA DA CREDIT RATING

质量服务诚信企业

ENTERPRISE OF QUALITY SERVICE INTEGRITY

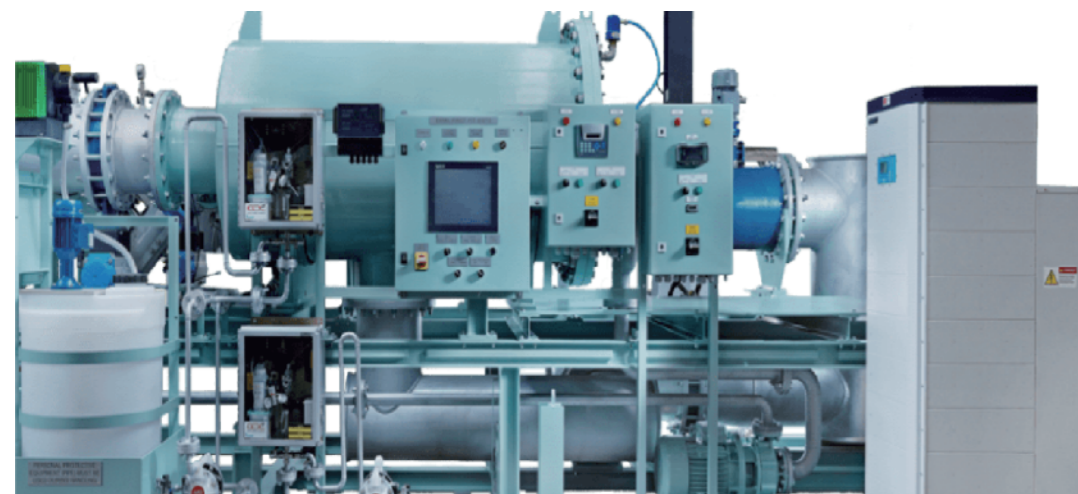
上海宸宇凡实业发展有限公司

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华大信用评级有限公司
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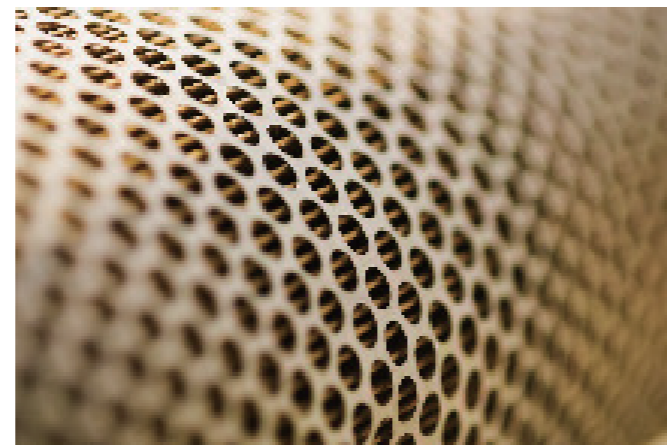
压载水处理系统一站式服务

One-stop service for BWTS



技术维护 Technical maintenance

提供船舶压载水处理系统的故障诊断、维修和保养服务
Provide BWTS technical fault diagnosis, repair and Maintenance .



备品备件 Spare parts

滤芯、UV灯管、TRO部件、各类传感器等
Filter elements, UV lamps, TRO parts, various sensors, etc.



水质检测 Water quality testing

提供IMOD-2&VGP水质取样和化验
Water quality testing Provide IMO D-2 &VGP water quality sampling and testing

设备年检 Equipment annual inspection

传感器校验、BWTS系统运行检测
Sensor calibration, BWTS System operation Commissioning



欧盟碳配额EUA服务履约帐户代开户服务碳税交易 EU ETS Services Compliance Account Opening Services Carbon Tax Trading

EUA开户

对于持有船舶证书 (Document of Compliance, DOC) 的船管和船东公司, 必须开设 Maritime Operator Holding Account, 只能从自有账户履约EUA。

我们提供代开服务

EUA account opening

For ship management and ship-owning companies holding ship certificates (Document of Compliance, DOC), they must open a Maritime Operator Holding Account and can only perform EUA from their own accounts.

We provide account opening services



全球碳交易 Global carbon trading

碳交易

熟悉碳交易规则及系统, 通过与海内外机构、政府等合作参与交易

Familiar with carbon trading rules and systems, and participate in trading through cooperation with institutions and governments at home and abroad.



委托交易

除自营交易外, 我们还可以为合作伙伴和客户 提供委托交易服务

In addition to self-management, we can also provide entrusted trading services to meet customer income and compliance needs.



EU-ETS配额交易与托管

为欧盟业务公司, 提供EU-ETS配额交易与托管服务
Provide carbon quota trading and custody services for EU-ETS business companies.

船舶能效管理计划编制与自动化监测

Preparation and automatic monitoring of ship energy efficiency management plan

IMO温室气体减排战略措施

国际海事组织(IMO)于2018年4月通过了全球首份航运业气体减排初步战略,以2008年碳排放为基准,提出到2030年将航运业碳排放强度降低30%,2040年碳排放强度降低70%(碳排放总量降低50%)的明确目标,并为实现这一目标制定了短期、中期和长期措施。

船舶每年的CII值将通过数据收集系统(DCS)进行计算,船舶将会被给予‘A'到'E'的评级',C'级以上为符合要求评级的数值等级。

In April 2018, the International Maritime Organization (IMO) adopted the world's first preliminary strategy for gas emission reduction in the shipping industry. Based on 2008 carbon emissions, it proposed to "reduce the carbon emission intensity of the shipping industry by 30% by 2030 and reduce carbon emissions by 2040." We have set a clear goal of reducing emissions intensity by 70% (and reducing total carbon emissions by 50%)" and have formulated short -, medium- and long-term measures to achieve this goal.

The annual CII value of the ship will be calculated through the data collection system (DCS), and the ship will be given a rating from 'A' to 'E', with C' and above being the numerical grade that meets the required rating.



服务范围 Service area

1、基础资料收集、整理、分析

Collect, organize and analyze basic data

2、提供船舶能效管理计划的编制,船级社数据提交及欧盟MRV申报

Provide the preparation of ship energy efficiency management plan, classification society data submission and EU MRV declaration,

3、提供CII 等级评定后的整改方案,对船舶进行全年碳排放量,排放效率等指标的监测、管理分析和评价。

Provide a rectification plan after CII rating assessment, for monitoring, managing, analyzing, and evaluating the annual carbon emissions, emission efficiency, and other indicators of vessels



船舶能效数据自动化监测

Automated monitoring of ship energy efficiency data

满足船舶智能船关于船舶能效管理要求规范

Meet the requirements of ship intelligent ships for ship energy efficiency management

适用于申请CCS智能能效管理功能标志(EOM、EOMs、EOMt)对船舶航行状态、能效及耗能状况进行在线监测和数据的自动采集;

Applicable to CCS Intelligent Energy efficiency management function marks (EOM, EOMs, EOMt) Online monitoring and automatic data collection of ship sailing status, energy efficiency and energy consumption;

对船舶能效及能耗状况进行评估、报告和报警。根据分析评估结果为能效管理提供辅助决策建议:航速优化和纵倾优化

Assessment, reporting and alerting of vessel energy efficiency and energy consumption . Based on the results of the analysis and evaluation, the decision-making recommendations for energy efficiency management are provided: speed optimization and trim optimization.

CIl预估和评级

CIl estimates and ratings



船舶燃油管理系统(MRV系统)

Marine Fuel Management System(MRV)

该系统满足欧盟2015/757(MRV)要求,并提供第三方认证证书

The system meets EU 2015/757(MRV) requirements and offers third-party certification

定时发送电子航海日志和轮机日志

Electronic logbook and engine log are sent regularly

自动生成燃油ROB报告,依照MRV规范自动导出油耗数据和尾气排放数据报告

Automatically generate fuel ROB reports, automatically export fuel consumption data and exhaust emission data reports according to MRV specifications

通过监控数据采集,分析和对比,提高船队管理效率,节能减排

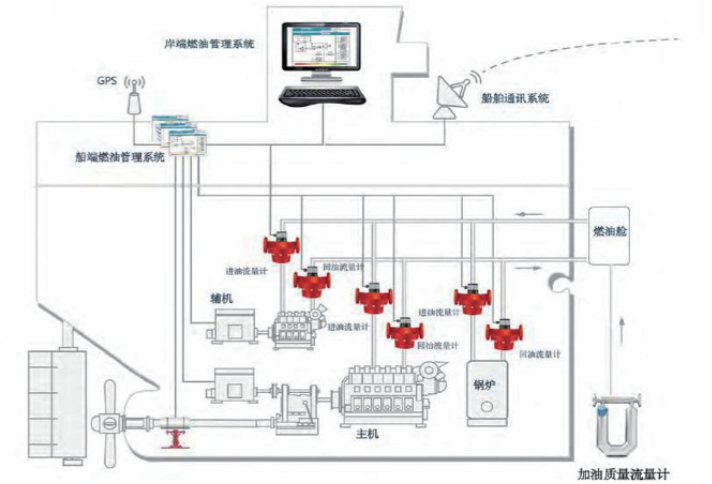
Through monitoring data collection, analysis and comparison, improve fleet management efficiency, energy saving and emission reduction



二氧化碳流量计的使用,完善了船舶精准测量碳排放的空缺,同时可完成包括辅助碳排放统计、建立排放数据库、乃至于和其他系统建立通讯,辅助完成低碳的控制运行策略。

The use of carbon dioxide flowmeter improves the vacancy of accurate measurement of carbon emissions by ships, and can also complete the auxiliary carbon emission statistics, the establishment of emission databases, and even the establishment of communication with other systems to assist in the completion of low-carbon control operation strategies.

在船安装示意图



二氧化碳流量计

Carbon dioxide flowmeter



碳强度等级提升合规整改措施 CII Rating Enhancement

燃料和能源 Fuel and energy

LNG/LPG

甲醇 Methanol
生物燃料 Biofuels
氢 Hydrogen
氨 Ammonia

机械设备 Machinery

碳捕集技术 carbon capture technology
变频改造技术 PWM technology
废热回收 waste heat recovery
燃料电池 fuel cell
变频抱轴发电机 PWM shaft generator

流体力学 Hydrodynamic

气体润滑减阻技术 Air lubrication
减阻油漆 Drag reduction paint
消涡鳍 Hub-Vortex Absorbed Fins(HVAF)
导流罩 Pre-Shrouded Vanes(PSV)
高效螺旋桨 High efficiency propeller
风能方案 wind energy solutions

数字化 Digitization

降低航速 reduce speed
提高船舶利用率 Increase ship utilization
船舶尺度 Ship scale
变更航线 Route alteration

燃料和新能源 Fuel and energy

燃料供给方案 Fuel supply

目前,液化天然气LNG双燃料使用量最多,而甲醇的获取来源更广泛。氨在使用时不会排放二氧化碳。氢燃料直接产生水,这为零碳排放的真正实现提供了巨大的动力。

Currently, liquefied natural gas(LNG) dual fuel is used the most, while methanol is available from a wider range of sources. Ammonia does not emit carbon dioxide when used. Hydrogen fuel directly produces water,which provides a huge impetus for the realization of truly zero carbon emissions.



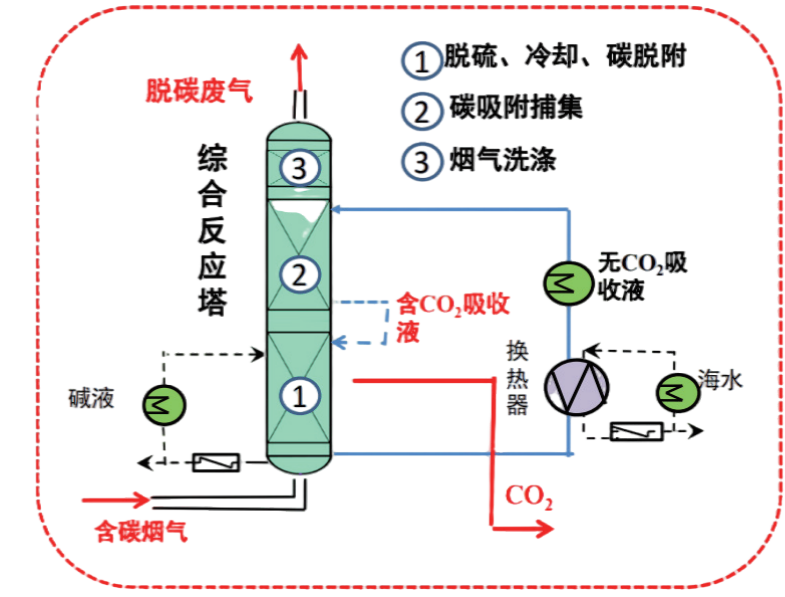
序号 No.	名称 Description	是否需要改装 Needs /unnecessary Modified ship
1	氢燃料 Hydrogen fuel	需要 need
2	氨 Ammonia	需要 need
3	甲醇 Methanol	需要 need
4	LNG/LPG	需要 need
5	生物燃料 Biofuels	不需要 unnecessary

机械设备 Machinery

碳捕集技术 Carbon capture technology

通过将二氧化碳从排放源中分离出来并直接利用或封存,以减少二氧化碳的排放。

Reduce carbon dioxide emissions by separating carbon dioxide from emission sources and directly utilizing or storing it.



变频改造技术 PWM technology

节能效果显著,根据船舶的实际需求,自动调整电机的转速,降低能耗实现节能效果

Energy-saving effect is remarkable, according to the actual needs of the ship, automatically adjust the speed of the motor, reduce energy consumption to achieve energy-saving effect



废热回收 waste heat recovery

在蒸发器中, 系统的余热 (如冷却水、蒸汽、烟气) 将有机介质加热, 使其转化蒸汽。

In the evaporator, the working fluid is heated up to superheated vapour making use of the available waste heat (such as water, steam and exhaust gases).

然后, 热的蒸汽在膨胀器内做功, 通过发电机将机械能转化为电能。

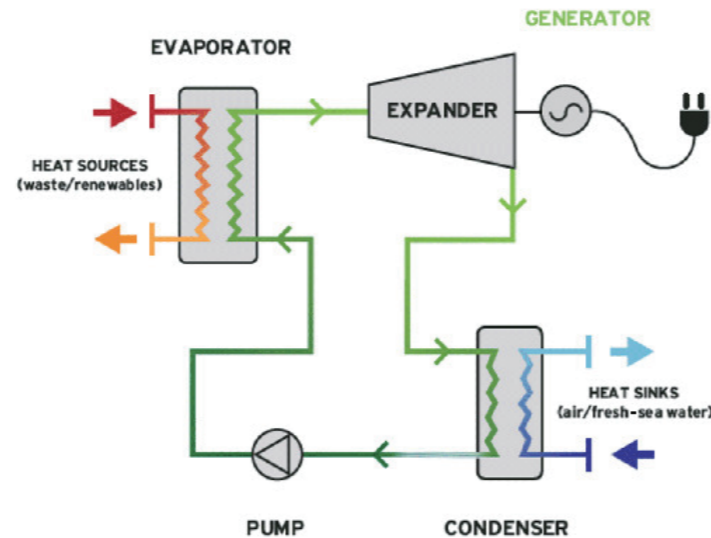
Then, the superheated vapour expands through a volumetric expander and produces mechanical work, which is converted to electricity by the generator.

做功完成后, 蒸汽在冷凝器中被重新冷却至液态。

The superheated working fluid is then condensed to saturated liquid in the condenser.

循环过程中需要工作泵对工作流体加压, 整个工作过程闭环运行。

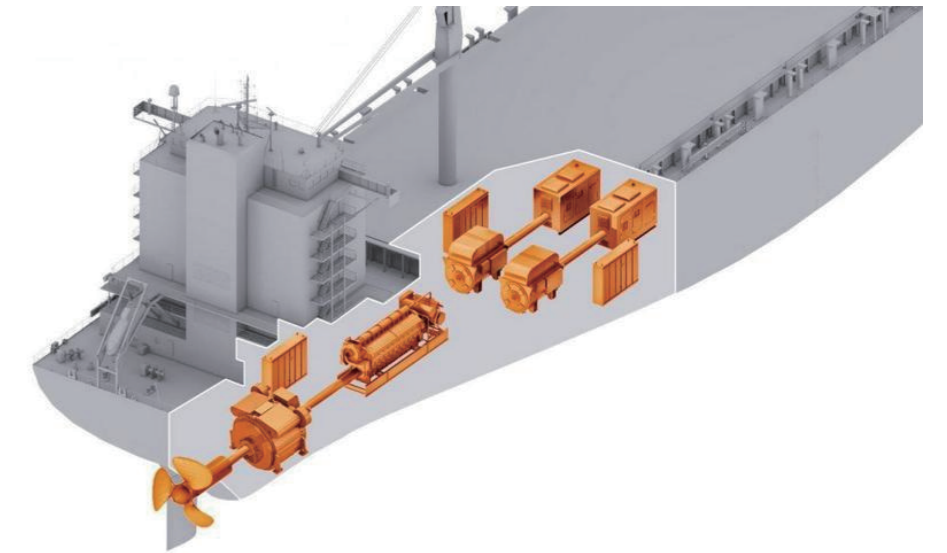
The pump pressurises the liquid working fluid, closing the cycle.



变频轴带发电机 PWM Shaft generator

原理是电能产生磁, 用磁铁磁力线切割里面的线圈, 从而产生电流发电。

The principle is that electric energy produces magnetism, and the magnetic lines of the magnet are used to cut the coil inside, thereby generating current and generating electricity.



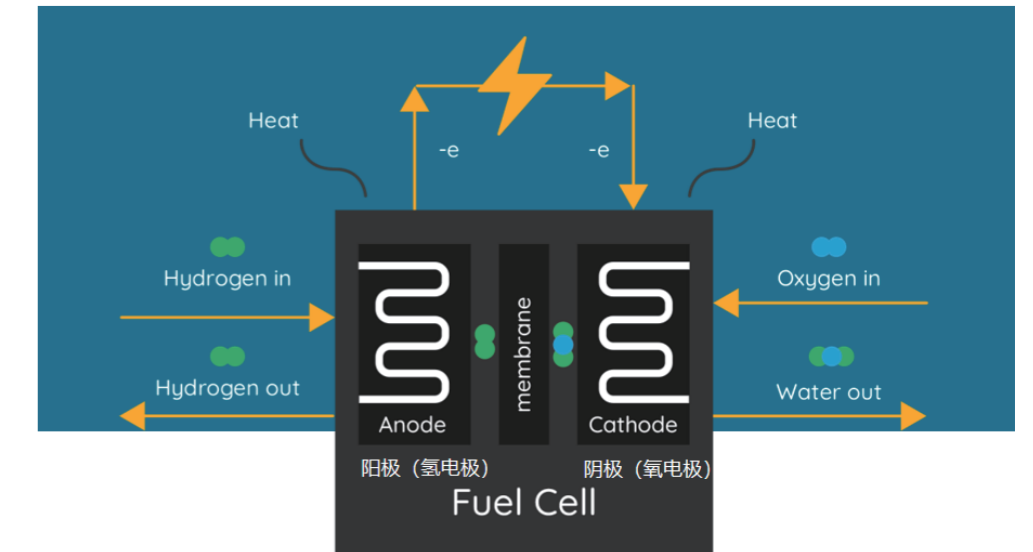
燃料电池 Fuel Cell

ENVIRONMENTAL IMOACT: Low noise and no vibration
低噪音 低振动

Cost: Low maintenance and twice as efficient as diesel generators

维护成本低, 效率是柴油发电机的两倍

Custom voltage From 5kW to 400kW and beyond
功率从 5kW 到 400kW 甚至更高



流体力学 Hydrodynamic

气体润滑减阻技术 Air Lubrication

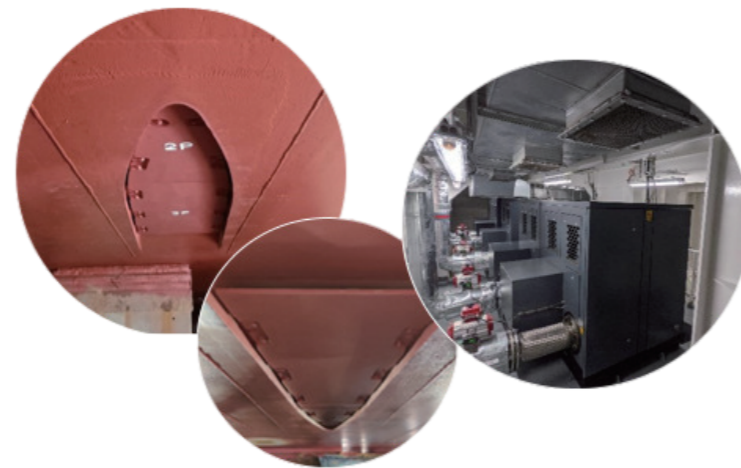
通过精密设计的气层减阻系统，向船体底部注入适量气体，使船底与水有效隔离，从而减少船舶湿表面积，降低船舶摩擦阻力。

Through the precisely designed air layer drag reduction system, an appropriate amount of gas is injected into the bottom of the hull to effectively isolate the bottom of the ship from the water, thereby reducing the wet surface area of the ship and reducing the frictional resistance of the ship.

减阻油漆 Drag reduction paint

船舶减阻涂料是一种特殊的船舶涂料，它的作用是在船舶表面形成一层光滑的涂层，从而减少水流的阻力，提高船舶的速度和燃油效率。同时，它还能防止海洋生物附着在船舶表面，减少船舶的维护成本和环境污染。

Marine drag reduction paint is a special Marine paint, its role is to form a smooth coating on the surface of the ship, thereby reducing the resistance of the water flow and improving the speed and fuel efficiency of the ship. At the same time, it can also prevent Marine organisms from attaching to the surface of the ship, reducing the maintenance cost of the ship and environmental pollution.



消涡鳍 Hub-Vortex Absorbed Fins (HVAF)

安装在螺旋桨后方带有鳍叶的一种新型桨帽，其结构简单、重量轻、安装方便、安全实用，能够有效降低螺旋桨毂涡能量损失。无论在新船还是旧船上安装，均可收获显著的节能效果。

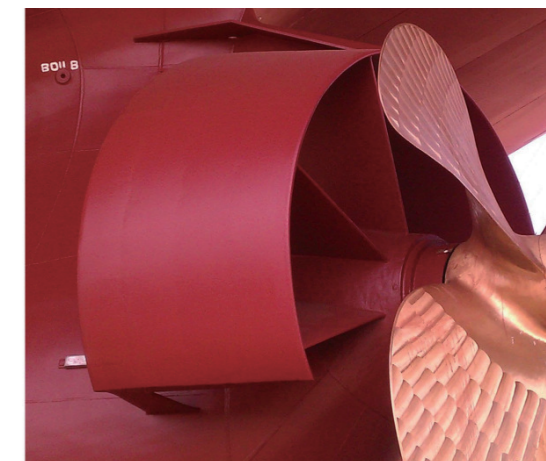
A new propeller cap with fins installed behind the propeller has a simple structure, light weight, easy installation, safety and practicality, and can effectively reduce the energy loss of the propeller hub vortex. Whether installed on new or old ships, significant energy savings can be achieved.



导流罩 Pre-Shrouded Vanes (PSV)

安装在螺旋桨前的前置式水动力节能装置，由导流叶片和导管组合而成；能够改善螺旋桨入流场的均匀性、提高船身效率，降低螺旋桨尾流旋转能量损失，从而获得显著的节能效果。

A front-mounted hydrodynamic energy-saving device installed in front of the propeller, which is composed of a guide blade and a duct; it can improve the uniformity of the propeller inflow field, improve the hull efficiency, and reduce the propeller wake rotation energy loss, thereby obtaining Significant energy saving effect.



高效螺旋桨 High Efficiency Propeller HEP



32万吨超大型油轮螺旋桨
HEP for 320kDWT VLCC

- ▶ 直径、叶数、盘面比率优化
Optimal diameter, blades number, area ratio, etc.
 - ▶ 负荷分布优化
Optimal radial load distribution
 - ▶ 剖面优化
Profile optimization
- ▶ 侧斜与纵倾优化
Optimal skew and rake
 - ▶ 效率、容泡、强度权衡设计
Trade off design among efficiency, cavitation and strength

风能方案 wind energy solutions

在海上航行时，船舶可以利用风能转化装置将风能转化为辅助推力，来降低主推进柴油机的燃料消耗，实现船舶的节能减排目标。

When sailing at sea, ships can use wind energy conversion devices to convert wind energy into auxiliary thrust to reduce the fuel consumption of the main propulsion diesel engine and achieve the ship's energy saving and emission reduction goals.

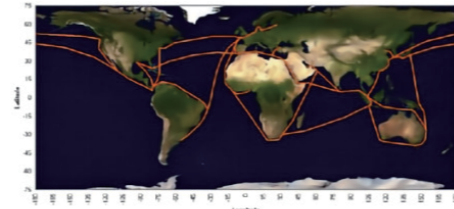


Figure 1 – The main global shipping network used for the wind chart

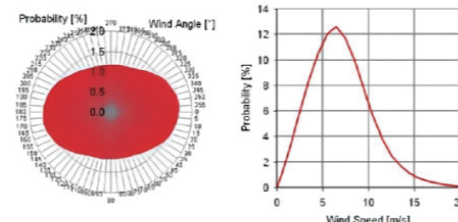


Figure 2 – Resulting wind curves on the main global shipping routes relative to the ship



感谢您认真阅读本手册，我们将在压载水领域和碳领域尤其是能效提升的产品选择方面为您提供全面的服务。如有不正之处，请不吝指教！

Thank you for reviewing this manual. We are committed to providing comprehensive services in ballast water and carbon sectors, Especially in enhancing energy efficiency product selections.