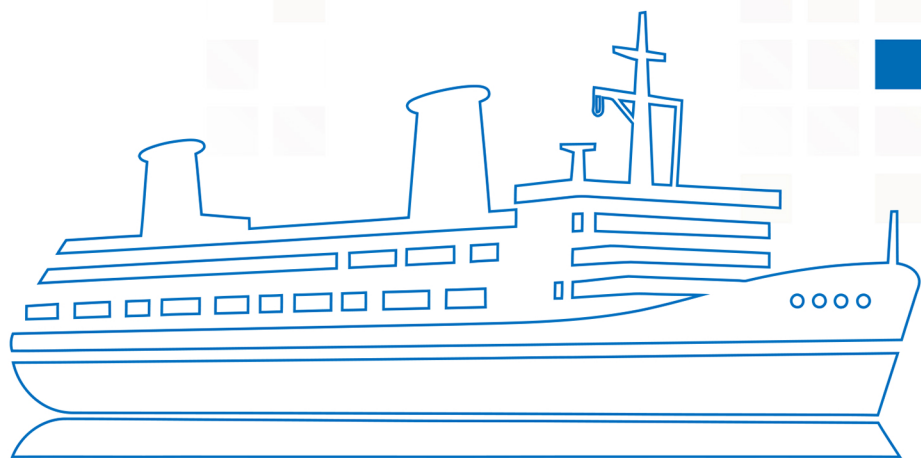




2025

Directories of Selected Maritime Equipment Brands



中国船舶工业行业协会
China Association of the National Shipbuilding Industry



焊接大师系列 Welding Master Intelligent Pipe Welding Robot 管道智能焊接机器人

陕西丝路机器人智能制造研究院有限公司，是陕西省智能机器人创新中心建设依托单位。公司是一家全栈机器人公司，专注于设计应用于自适应焊接的基于人工智能的机器人解决方案。丝路机器人的管道焊接机器人，是在国内率先实现生产应用的全流程全自动管道焊接机器人。作为自适应焊接的倡导者，丝路机器人致力于解决具有挑战性的焊接自动化问题，从而不断提升客户的产品品质和盈利能力。

Shaanxi Silk Road Robotics Intelligent Manufacturing Research Institute Co. Ltd, is a dependency unit for the construction of the Intelligent Robotics Innovation Center in Shaanxi Province. The company is a full-stack robotics company that specializes in designing AI-based robotic solutions applied to adaptive welding. Silkroad Robotics' pipeline welding robot is the first fully automated pipeline welding robot in China to realize production applications in the whole process. As the advocate of adaptive welding, Silkroad Robotics is committed to solving challenging welding automation problems so as to continuously improve customers' product quality and profitability.

管道智能焊接机器人搭载的UMATIC为行业首创

仅需一键启动，实现打底到填充盖面的全自动焊接满足射线一级探伤标准。

Pipeline intelligent welding robot equipped with UMATIC for the first time in the industry just one key to start, to realize the bottoming to fill the cover surface of the fully automated welding to meet the first-class ray detection standards.

焊接一次合格率
Welding pass rate

98.7%

修复率降低至
Repair rate reduced to

1%

生产效率提高
Increased productivity

3-5倍

Product parameters 产品参数

③ 应用 Application

船舶海工、石油化工
Shipbuilding, offshore engineering, petrochemicals

③ 尺寸 Dimensions

管径: 3"-12" 管长: 500-8000mm 壁厚: 3-25mm
Pipe diameter: 3-12 Pipe length: 500-8000mm Wall thickness: 3-25mm

③ 材料 Materials

碳钢、316L、双相不锈钢、超级双相不锈钢
Carbon steel, 316L, duplex stainless steel, super duplex stainless steel

③ 质量标准 Quality Standards

ASME IX/B31.3/BPVC IX/V 标准
ASME IX/B31.3/BPVC IX/V Standard

安全 Safety

全流程自动化，无需人工干预，降低企业安全风险
Fully automated process, no manual intervention required, reducing enterprise security risks

品质 Quality

高品质自适应焊接，焊接工艺与质量双达标
High-quality adaptive welding, with both welding process and quality meeting standards

效率 Efficiency

快速焊接，一次成型
Quick welding, one-time molding

付款 Payment

灵活合作，买租均可，匹配您的投产计划
Flexible cooperation, purchase or lease options available, tailored to your investment plan

可扩展至管道产线，实现高效、柔性化生产

Can be extended to pipeline production lines to achieve efficient and flexible production.

PREFACE

A stable supply chain is critical to the shipbuilding industry. In recent years, Chinese maritime supply chain companies have strengthened their R&D and market development, giving rise to a growing number of proven products-including marine equipment, shipbuilding facilities, and industrial software-that have contributed to supply chain stability.

To further enhance supply chain resilience, the China Association of the National Shipbuilding Industry has organized a selection process to showcase outstanding products. A considerable number of products have now been compiled into this directory, which is published as a reference for maritime industrial enterprises.

**China Association of the National Shipbuilding Industry
October 2025**

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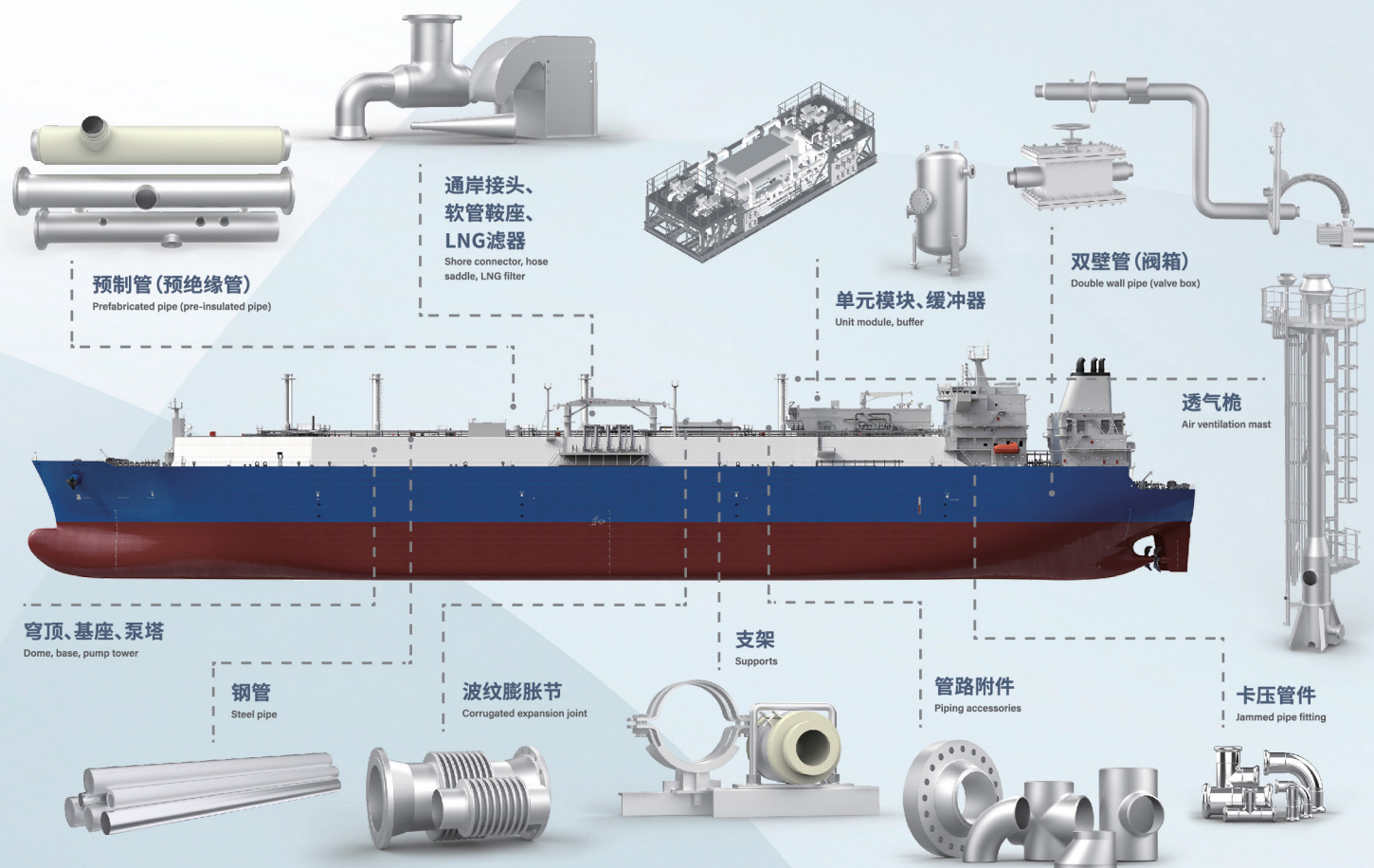
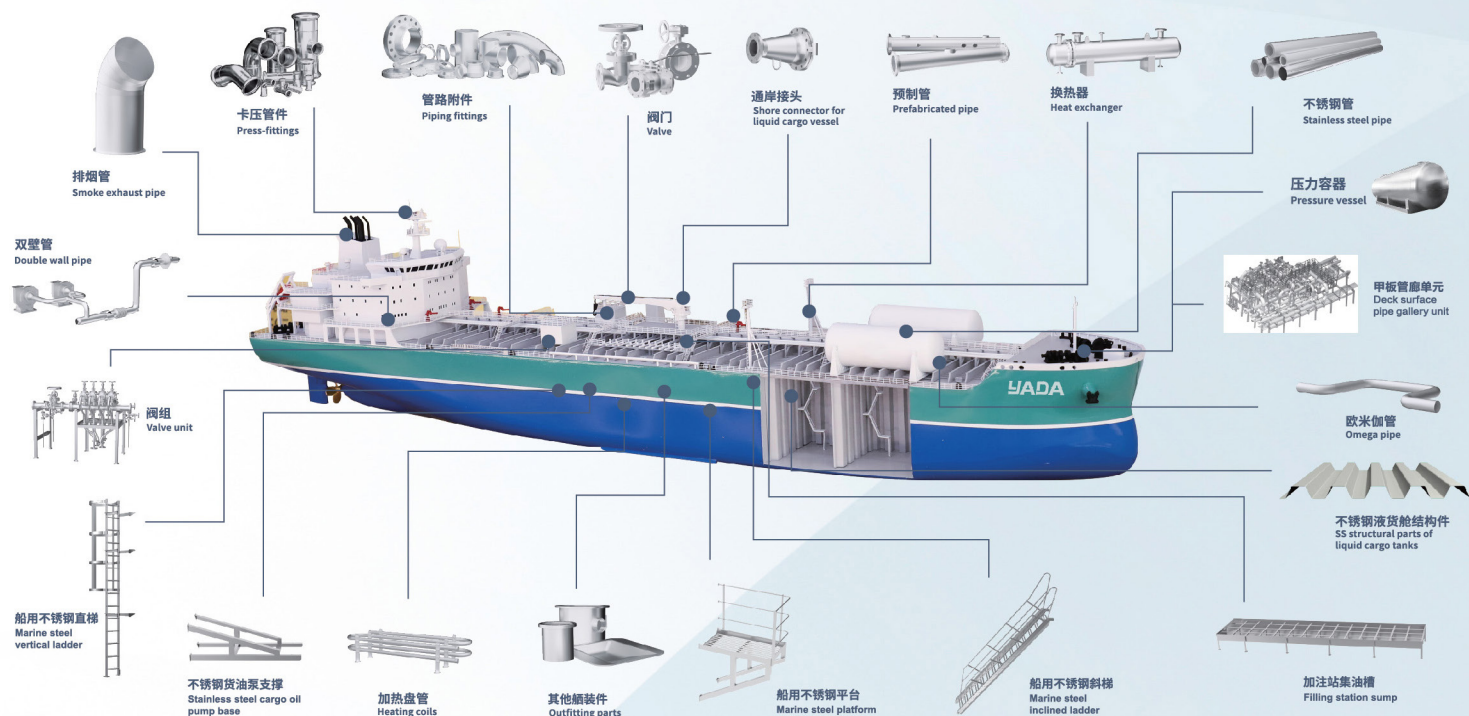
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★ Engine and Its Components



CSSC Shanghai Marine Diesel Engine Research
Institute

Marine Intelligent Medium-Speed Diesel Engine
Marine LNG Engine

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CSSC Shanghai Marine Diesel Engine Research
Institute

Marine Methano Medium-Speed Engine

P29



Weichai Heavy Machinery Co., Ltd.

micro-injection pilot methanol engine
micro-jet pilot gas engine

P30



Weichai Heavy Machinery Co., Ltd.

series commercial marine generator set
Diesel Engine for Marine

P32



Chongqing Jiangzeng Shipbuilding Heavy Industry
Co., Ltd.

Turbocharger



Zichai Power Co., Ltd.

**Marine LNG/Diesel Dual-Fuel Medium-
Speed Engine**



COSCO Shipping Marine Equipment & Spares
(Nanjing) Co., Ltd.

Marine Diesel Engine Air Valve



Accelleron Turbo Systems (Chongqing) Limited

Marine Low-Speed Engine Turbocharger
**Marine & Offshore Medium-Speed
Engine Turbocharger**

P34

★ Engine and Its Components



Guangdong Epropulsion Technology Co., Ltd.

Electric Outboard Motor



Chongqing Qingping Machinery Co., Ltd.

Low-Speed Diesel Engine Turning Gear



Chongqing Hongjiang Machinery Co., Ltd.

Marine Diesel Engine Electronic Control System



Chongqing Hongjiang Machinery Co., Ltd.

Marine Diesel Engine High-Pressure Fuel Injection System



Chongqing Hongjiang Machinery Co., Ltd.

Electronic Control Injection System for Gas and Dual-Fuel Engines



Chongqing Hongjiang Machinery Co., Ltd.

Electronic Unit Pump (EUP)



Chongqing Hongjiang Machinery Co., Ltd.

Heavy Fuel Oil High-Pressure Common Rail System



Chongqing Hongjiang Machinery Co., Ltd.

Marine Medium/High-Speed Diesel Engine Bushing

★ Shafting and Propulsion Device



CSSC Shanghai Marine Diesel Engine Research
Institute

Carbon Fiber Composite Propeller Shaft



CSSC Shanghai Marine Diesel Engine Research
Institute

Marine Lightweight Gearbox



China State Shipbuilding Corporation Limited
(CSSC) No.704 Research Institute

Azimuthinf Podded Drive System (AZIPOD)

P36



China State Shipbuilding Corporation Limited
(CSSC) No.704 Research Institute

DC Integrated Electric Propulsion System

P37



Shanghai Changqiang Heavy Industry Co., Ltd.

**Multi-Directional Die-Forged Crankshaft
for Large Marine Low-Speed Diesel Engine**



杭齿前进

Hangzhou Advance Gearbox Group Co., Ltd.

Gear Transmission Device



Nanjing High Accurate Marine Equipment Co., Ltd.

Rudder Propeller Propulsion System



Zhejiang Fengshen Ocean Engineering
Technology Co., Ltd.

**Marine Voith-Schneider Propeller (VSP)
Propulsion System**

★ Shafting and Propulsion Device



Guangzhou HG Marine Co., Ltd.

Rim-Driven Thruster

P38



Shandong Baoding Heavy Industry Co., Ltd.

Propulsion Shafting System



POWERMASTER MARINE
倍豪船舶

Hefei Powermaster Marine Equipment
Technology Co., Ltd.

Azimuth Thruster

★ Fuel Supply and Exhaust Gas Treatment



CSSC Shanghai Marine Diesel Engine Research
Institute

**Marine LNG Fuel Gas Supply System (FGSS)
Marine Denitrification System (SCR)**



CSSC Shanghai Marine Diesel Engine Research
Institute

**Marine Desulfurization System (Scrubber)
Ship Carbon Capture System**



CSSC Shanghai Marine Diesel Engine Research
Institute

**Marine Methanol Fuel Supply System
(MFSS)**



Sinotech Haicarbon (Shanghai) Environmental
Protection Technology Co., Ltd.

**Marine Desulfurization and
Decarbonization System**

★ Fuel Supply and Exhaust Gas Treatment

T.B.G

Tbg Marintec Co., Ltd

Fuel Oil Supply Unit

CSSC 青岛双瑞
SUNRUI

Qingdao Sunrui Water Environmental
Engineering Co., Ltd.

Marine LNG Fuel Gas Supply System (FGSS)

OCEAN GUARD

Headway Technology Group (Qingdao) Co., Ltd.

**Marine Methanol Fuel Supply
System (MFSS)**

OCEAN GUARD

Headway Technology Group (Qingdao) Co., Ltd.

**Marine Desulfurization and
Decarbonization System**



Hefei Zhonghai Blue-navi Technology Co., Ltd.

**Marine Continuous Emission Monitoring
System (CEMS)
SCR Exhaust Gas Treatment Equipment**

P39

SDL 雪迪龙

环境与工业分析检测专家

Beijing SDL Technology Co., Ltd.

**Marine Continuous Flue Gas Emission
Monitoring System**

P40



Yada Green Energy Solutions Co., Ltd.

**Marine LNG Fuel Transfer Double-Wall
Piping System**

广船 海科

Guangdong Guangzhou Shipyard International
Marine Technology Research Institute Co., Ltd.

**Marine Methanol Fuel Supply
System (MFSS)**

P41

★ Electrical Equipment and Apparatus



Nanchang Kungfu Power Equipment Co., Ltd

Marine Generator



Dezhou Hengli Electrical Machinery Co., Ltd.

Marine Electric Motor



Luoyang Jinglian Machinery Basic Parts Co., Ltd.

Shaft Generator Coupling



Tianshui 213 Electrical Apparatus Group Co., Ltd.

Marine Low-Voltage Electrical Appliance

P42



Shanghai Yunshen Shipbuilding Engineering Co., Ltd.

Marine Potentiostat

★ Deck Machinery



Jiangsu Masada Heavy Industries Co., Ltd.

**Steering Gear
Anchor Windlass**



Jiangsu Masada Heavy Industries Co., Ltd.

Deck Crane

★ Deck Machinery



Rudong Hongxin Machinery Co., Ltd.

Umbilical Cable Winch

P43



Wuhan Marine Machinery Plant Co., Ltd.

Electric Anchor Windlass

P44

★ Basic Components



CSSC ChongQing Hydraulic Mechanical-
Electrical Co., Ltd.

**Hydraulic Cylinder for Hydraulic
Engineering Machinery**



Atekon Technology Co., Ltd.

Programmable Logic Controller (PLC)

★ Pumps Valves and Piping Systems



Suzhou Jiumei Fiberglass Co., Ltd.

**FRP (Fiberglass Reinforced Plastic) Pipes
and Fittings**

P51



Shandong Zhuangfa Pump Industry Co., Ltd.

Marine Pump



CSSC ChongQing Hydraulic Mechanical-
Electrical Co., Ltd.

High-Pressure Plunger Pump



Wuhan Marine Machinery Plant Co., Ltd.

Electric Deep Well Pump

P52

★ Accommodation Equipment



Qingdao Sunrui Marine Environment
Engineering Co., Ltd.

Marine Ballast Water Management System



Headway Technology Group (Qingdao) Co., Ltd.

Marine Ballast Water Management System



Hansun (shanghai) Marine Technology Co,Ltd

Incinerator

P46



Hansun (shanghai) Marine Technology Co,Ltd

Fresh Water Generator

P47



Wei Hai CreditFan Ventilator Co., Ltd

Marine Axial Flow Fan



China State Shipbuilding Corporation Limited
(CSSC) No.704 Research Institute

Marine Plate Heat Exchanger

P48



Shenzhen Davo Electronics Co., Ltd.

Marine Metal Keyboard

P49

★ Communication and Navigation Equipment

CSSC 中船航海

CSSC Marine Technology Co., Ltd.

Marine Fiber Optic Gyrocompass (FOG)

P50

 **HUAYAN**

Hangzhou Huayan Digital Electronics Co., Ltd.

Platform Public Address (PA) System

 **KEXUN**

Jiaxing Kexun Electron Co., Ltd.

**Public Address & General Emergency Alarm
System (PAGA)**

 **KEXUN**

Jiaxing Kexun Electron Co., Ltd.

Marine Integrated Communication System

 **海星通**

Sino satellite Communications Co., Ltd.

**Maritime Satellite Communication
Solution**



Liaoning Spark Software Co., Ltd.

**Electronic Chart Display and Information
System (ECDIS) Module**

中船瑞通

Qingdao JARI Automation Co., Ltd.

**Maritime Multi-Mode Optional Remote
Communication Terminal**

★ Marine Energy-Saving Equipment



CSIC (China Shipbuilding Industry Corporation)
Shanghai Marine Energy Saving Technology
Development Co., Ltd

Propeller Boss Cap Fins (PBCF)

P54



CSIC (China Shipbuilding Industry Corporation)
Shanghai Marine Energy Saving Technology
Development Co., Ltd

Pre-Swirl Stator (PSS)

P55



CSIC (China Shipbuilding Industry Corporation)
Shanghai Marine Energy Saving Technology
Development Co., Ltd

Wind-Assisted Rotor (Flettner Rotor)

P56



CSIC (China Shipbuilding Industry Corporation)
Shanghai Marine Energy Saving Technology
Development Co., Ltd

Marine Air Lubrication System

P57



CSSC Shanghai Marine Diesel Engine Research
Institute

Marine Waste Heat Recovery Power Generation Unit



CSSC Shanghai Marine Diesel Engine Research
Institute

Shaft Generator System



AEROFOIL 御风翔

CSSC Dalian Shipbuilding Industry Development
Co., Ltd.

Rigid Wing Sail

★ Marine Intelligent Systems



Dongguan Xiaotun Intelligence Technology Co., Ltd.

Navigation Control System



Mairun Intelligent Technology (Shanghai) Co., Ltd

Visual Situational Awareness Navigation Assistance System

P58



Jiangsu Yuanwang Instrument Group Co., Ltd.

Intelligent Engine Room Monitoring and Alarm System

P59



Headway Technology Group Co., Ltd.

Marine Intelligent Energy Efficiency Management System



Qingdao JARI Industrial Control Technology Co., Ltd.

Integrated Berthing/Unberthing Assistance Equipment



Shanghai ZhouYi Mechanical and Electrical Equipment Co., Ltd.

Marine Oil-Water Intelligent Monitoring and Management System

P60

CSSC 黄埔文冲

CSSC Huangpu Wenchong Shipbuilding Co., Ltd.

Refrigerated Container Monitoring System (PCT Type)

CSSC HEISHIN

GWS-HSN CO.,LTD.

Reefer Container Monitoring System(PCT)

P61

★ Specialized System Equipment



Lianyungang JARI Automation Co., Ltd.

**Marine LNG Transfer Equipment
and System**



Dalian Shidao Industry Co., Ltd.

Anti-Fall System of Containers Shippment

P62



Jiangnan Shipyard (Group) Co., Ltd.

Cargo Containment System-Type B



CSSC Shanghai Marine Diesel Engine Research
Institute

LNG Cryogenic Reliquefaction Unit



CSSC Shanghai Marine Diesel Engine Research
Institute

Gas Combustion Unit (GCU)



CSSC Shanghai Marine Diesel Engine Research
Institute

LNG Heat Exchanger



Nantong CIMC Sinopacific Offshore & Engineering
Co., Ltd.

Marine Liquefied Gas Storage Tank

P63



Watts Energy & Engineering Co., Ltd.

Marine Liquefied Gas Storage Tank

P64

★ Specialized System Equipment



广船国际海科院
GSI MARINE RESEARCH CENTER

Guangdong Guangzhou Shipyard International
Marine Technology Research Institute Co., Ltd.

**Ro-Ro Passenger Ship Auxiliary Berthing
System**



KOE 精钢海工

Keen Offshore Engineering Co., Ltd.

**Jack-Up Platform Jacking and Locking
System**



Chongqing Qingping Machinery Co., Ltd.

**Gearbox of Offshore Jack-Up Platform
Lifting Unit**



Chongqing Qingping Machinery Co., Ltd.

**Slewing/Hoisting Reducer for Offshore
Crane**



Chongqing Qingping Machinery Co., Ltd.

Yaw/Pitch Reducer for Wind Turbine



衡拓船舶
HUNTER MARINE

Shanghai Hengtuo Marine Equipment Co., Ltd.

Platform Jack-up System



China State Shipbuilding Corporation Limited
(CSSC) No.704 Research Institute

**Scientific Research Operation Support
System**

P65



中国中车
CRRC

CRRC SMD(SHANGHAI) LTD.

**Deep-Sea Intelligent Trenching and
Cable-Laying Robot**

P66

★ Outfitting and Equipment



Guangdong Guangzhou Shipyard International
Elevator Electro-mechanical Equipment Co., Ltd.

Marine Elevator

P68



DNDT 航天级电梯更安全

Dongnan Elevator Co., Ltd.

Marine Elevator

P69



Tianjin Huali Thermal Insulation Building
Materials Co., Ltd.

**Sanitary Unit (Toilet Module)
Fireproof Door**



Jiangsu Hailu Technology Co., Ltd.

**Sanitary Unit (Toilet Module)
Fireproof Door**

P70



Yantai Beihai Marine Engineering Technology Co.

Offshore Modular Cabin



Hangzhou Huayan Digital Electronics Co., Ltd.

Fire Alarm Control Panel



Jiaxing Kexun Electronics Co., Ltd.

Fire Detection and Alarm System



Guangzhou Ruigang Fire-fighting Equipment
Co., Ltd.

**Marine HFC-227ea Fire Extinguishing
Device**

P72

★ Outfitting and Equipment



Guangzhou Ruigang Fire-fighting Equipment
Co., Ltd.

**Pressure-Type Foam Proportioning
Mixing Device**



Guangzhou Ruigang Fire-fighting Equipment
Co., Ltd.

**Fixed Local Water-Based Fire
Extinguishing System**



Guangdong Yingsui Fire-fighting Equipment
Co., Ltd.

**Marine Dry Powder Fire Extinguishing
Equipment**



Guangdong Yingsui Fire-fighting Equipment
Co., Ltd.

Marine Gas Fire Extinguishing System



Guangdong Yingsui Fire-fighting Equipment
Co., Ltd.

Marine Foam Fire Extinguishing System



Shanghai Guanzhuo Enterprise Development
Co., Ltd.

Intelligent Quick Cable Release Hook



Qingdao Anchor Chain Co., Ltd. (QAC)

Marine and Offshore Anchor Chain



Asian Star Anchor Chain Co., Ltd.

**Marine Anchor Chain
Mooring Chain**

★ Outfitting and Equipment



Zhengmao Group Co., Ltd.

Marine Anchor Chain and Offshore Mooring Chain



NORTHSEA

Yantai Beihai Marine Engineering Technology Co.

Aluminum Heli-deck

P73



WANCHENG ANCHOR CHAIN

Qingdao Wancheng Anchor Chain Co., Ltd.

Marine Anchor Chain



CSAC 中运锚链

China Shipping Anchor Chain(Jiangsu) Co., Ltd

Marine Anchor Chain

P74



Zhoushan Zhongnan Anchor Chain Co., Ltd.

Marine Anchor Chain

P75



山钢集团 SD STEEL

Laiwu Iron & Steel Group Zibo Anchor Chain Co., Ltd.

Marine Anchor Chain

P76



HUNTER MARINE

Shanghai Hengtuo Marine Equipment Co., Ltd.

**Stabilizing Fin
Stabilizing Gyro**



新港

Jiangsu Xingang Ship Machinery Co., Ltd.

Marine Pipe Clamps and Pipe Supports

★ Marine Materials



Jiangsu Hailu Technology Co., Ltd.

Composite Panel

P77



Tianjin Huali Thermal Insulation Building
Materials Co., Ltd.

Composite Rock Wool Board



Changshu Longteng Special Steel Co., Ltd.

Hot-Rolled Bulb Flat Steel

LOOHAN 龙焊

Changshu Longteng Welding Material
Technology Co., Ltd.

Flux-Cored Welding Wire



Zhejiang Baofeng Steel Group Co., Ltd.

Stainless Steel Seamless Coiled Tube

P78



Zibo TAA Metal Technology Co., Ltd.

Metal Abrasive



Xiamen Sunrui Ship Coatings Co., Ltd.

Marine Coating

P79



Zhejiang UTOP New Materials Co., Ltd.

Marine Coating

★ Marine Materials



Zhejiang Zetastone Wire & Cable Co., Ltd.

Marine Low-Voltage Power Cable



Baosheng Technology Innovation Co., Ltd.

Marine Electrical Wire and Cable



Shandong Daya Electromechanical Technology Co., Ltd.

Ship Hull Steel Castings

★ Industrial Software



Guangzhou ZWSOFT Co., Ltd.

CAD/CAE/CAM Software



Shanghai Shipbuilding Technology Research Institute

Ship Robotic Welding Process Planning and Simulation Software (iRobCAM)



China Ship Scientific Research Center (CSSRC)

Ship Fluid Dynamics CAE Software

P80



China Ship Scientific Research Center (CSSRC)

Ship Structural CAE Software

P81

★ Digital Manufacturing System



Shaanxi Silk Road Robot Intelligent Manufacturing
Research Institute Co., Ltd.

**UMATIC Intelligent Welding Decision-
Making Platform**



Shandong Aotai Electric Co., Ltd.

Intelligent Welding Cloud System



Tangshan Kaiyuan Automatic Welding Equipment
Co., Ltd.

Ship Block Robotic Welding System

P83



Shanghai Shipbuilding Technology Research
Institute

**Shipbuilding Workshop Intelligent
Management and Control System
Software (iMES)**



Zhejiang Sanxiang Data Co., Ltd.

**Digital Management and Control System
for Ship Repair and Building**



Shanghai Shipbuilding Technology Research
Institute

**Smart Safety Monitoring System for Ship
Repair and shipbuilding**



Guangzhou Red Sail Technology Co., Ltd.

**Ship Production Resource Management
and Control Platform**

P85



Shanghai Waigaoqiao Shipbuilding Marine
Engineering Design Co., Ltd.

Digital Shipbuilding Cloud Platform

★ Digital Manufacturing System



Guangzhou Red Sail Technology Co., Ltd.

Paperless Shipbuilding Platform

P86



Guangzhou Red Sail Technology Co., Ltd.

Intelligent Energy Management and Control System

★ Industrial Internet Platform



CSSC Industrial Internet Co., Ltd.

Industrial Internet Platform



CSSC Heavy Industry Information Technology Co., Ltd.

Application Development Platform

★ Production line equipment



Shanghai Shipbuilding Technology Research Institute

Intelligent Marine Profile Processing Line



Shanghai Shipbuilding Technology Research Institute

Intelligent T-Profile Assembly and Welding Line



Shanghai Shipbuilding Technology Research Institute

**Flat Block Assembly Line
Ship Painting Workshop Production Line**



Shanghai Shipbuilding Technology Research Institute

Digital Strip Material Production Line

★ Production line equipment



Shandong Daya Machinery Technology Co., Ltd.

Intelligent Steel Plate Pretreatment Line

P93



Wuxi Hualian Science & Technology Group Co., Ltd.

Automated Intelligent T-Profile Assembly and Welding Line

P94



Wuxi Hualian Science & Technology Group Co., Ltd.

Intelligent Flat Block Assembly Line

P95



Wuxi Hualian Science & Technology Group Co., Ltd.

Intelligent Integrated Line for Chamfering, Polishing and Slag Cleaning

P96



PENTA LASER

Penta Laser (Zhe jiang) Co., Ltd

Laser Production Line for Shipbuilding Profiles/Bulb Flats

P97



Huagong Technology Industry Co., Ltd.

Intelligent Cutting and Blanking Line for Components

P98



Huagong Technology Industry Co., Ltd.

Intelligent Sub-assembly and Welding Production Line

P99



南方环境有限公司
SOUTHERN ENVIRONMENT CORPORATION LIMITED

Southern Environment Corporation Limited Co., Ltd.

Welding Fume Collection and Purification System

P100

★ Production Management System



Guangzhou Red Sail Technology Co., Ltd.

**Computer Integrated Manufacturing
System for Shipbuilding**



Shanghai Dongxin Software Engineering Co., Ltd.

Dongxin Ship Digital Management Software

P87



CSSC Heavy Industry Information Technology
Co., Ltd.

**Ship Piping Flexible Processing and
Management Control System**



Jiangsu Modern Shipbuilding Technology Co., Ltd.

**Pipe MES System Software
Ship Repair Solution Software (CRS)**

P88



Xianglai Technology (Ningbo) Co., Ltd.

PAMS System for Shipbuilding Industry



Jiangsu Modern Shipbuilding Technology Co., Ltd.

**Modern Shipbuilding Solution
Software (CCS)**

P90



Jiangsu Modern Shipbuilding Technology Co., Ltd.

**Modern Shipbuilding Steel Management
System Software**

P91



Wuhan Huagong Saibai Data System Co., Ltd.

**Huagong Intelligent Yard Management
System**

P92

★ Process equipment



CSSC Heavy Industry Information Technology
Co., Ltd.

Ship Hull Coating Workstation



CSSC Heavy Industry Information Technology
Co., Ltd.

Ship Assembly Robotic Workstation

HAN'S LASER
Smart Equipment Group

Han's Laser Smart Equipment Group Co., Ltd.

Rail-Mounted Laser Cutting Machine

P101



PENTA LASER

Penta Laser (Zhe jiang) Co.,Ltd

Shipbuilding Laser Cutting Equipment

P102



Beijing Botsing Technology Co., Ltd.

**Trackless All-Position Crawling Welding
Robot**

P103



BingooRobot (Tianjing) Co., Ltd.

Painting Robot

P104



BingooRobot (Tianjing) Co., Ltd.

Rust Removal Robot



BingooRobot (Tianjing) Co., Ltd.

Surface Roughening Robot

★ Process equipment



IMC Shipyard (Zhoushan) Co., Ltd.

**Vacuum Ultra-High Pressure Water Jet Ship
Anti-Corrosion Pretreatment System**

P105



Beijing TimeRiver Technology Co., Ltd.

Ship Rust Removal Robot

P106



Shenzhen AKA Robotics Technology Co., Ltd.

Wall-Climbing Ship Rust Removal Robot

P107



COSCO(Nantong) Clavon Ship Engineering Co., Ltd

**Ultra-High Pressure Water Jet Ship Rust
Removal Equipment Set**

P108



Aotai Electric Co., Ltd.

Industrial Inverter Welding Power Supply



南方环境有限公司
SOUTHERN ENVIRONMENT CORPORATION LIMITED

Southern Environment Corporation Limited
Co., Ltd.

**Organic Waste Gas Treatment Equipment
for Ship Painting Industry**

P110



Shanghai Haihuan Technology Co., Ltd.

Vehicle-Mounted Ship Hull Cleaning Robot



Guangdong Shipyard International Elevator
Co., Ltd.

CNC Bending Machine

★ Process equipment



Shanghai Shipbuilding Technology Research
Institute

**Tightness Testing Equipment for LNG
Membrane Containment System**



Shanghai Shipbuilding Technology Research
Institute

**Automatic Welding Equipment for Ship Ship
Sub-Assemblies**



Shanghai Shipbuilding Technology Research
Institute

**VOCs Treatment Equipment for Ship
Painting**



Shanghai Shipbuilding Technology Research
Institute

CNC Frame Bending Machine



Shanghai Shipbuilding Technology Research
Institute

**Automatic Welding Equipment
for Corrugated Plates of Mark III
Cargo Containment System**



Shanghai Shipbuilding Technology Research
Institute

**Ship Rudder Propeller Shafting
Installation Platform**

Shanghai Iansuo Electronics Technology Co., Ltd., established in 2015, is a deep-sea transmission technology solutions provider. It was founded by bringing together authoritative technical experts and professionals in China's optoelectronic interconnection and transmission industry, in response to the development context of national high-tech industries in the new era.

Currently, the company holds 23 utility model patents and over 20 invention patents, and has obtained ISO 9001 quality management system certification. Recognized as a Shanghai High-Tech Enterprise and a member unit of the China Oceanographic Society, it was also the research contractor for the 2019 National Key R&D Program "Deep-Sea Key Technologies and Equipment" under the Ministry of Science and Technology. It serves as the sole domestic supplier of watertight cables and connectors for China's independently developed full-ocean-depth manned submersible "Deep Sea Warrior."

The core R&D team boasts extensive scientific research experience, having led and participated in multiple National Key R&D Projects during the 11th, 12th, 13th, and 14th Five-Year Plans. The company has undertaken 12 projects for the General Armaments Department, 10 projects for the Ministry of Science and Technology, and 1 project for the State Oceanic Administration. It has published 19 authoritative papers, formulated 1 national military standard (GJB), and achieved 1 internationally leading, 21 internationally advanced, and 1 domestically leading technical appraisal achievements.

With service networks in Shanghai, Liaoning, Zhejiang, and Hainan, the company provides nationwide after-sales support, ensuring service coverage highly aligned with customer needs. In Taizhou, Zhejiang Province, the company operates an integrated R&D, production, and testing facility covering over 20,000 square meters, with a total floor area of 40,000 square meters. The facility includes specialized production workshops and assembly lines, equipped with industry-leading manufacturing, inspection, and R&D testing equipment—such as specialized cable production lines, high-precision testing instruments, and fully automated assembly lines—enabling it to meet customized demands.

The company's products meet or exceed the performance metrics of imported counterparts. In compliance with GJB system requirements, it manufactures military products with an annual production capacity of 1.1 million meters of specialty cables and various components, ensuring reliable product delivery cycles.



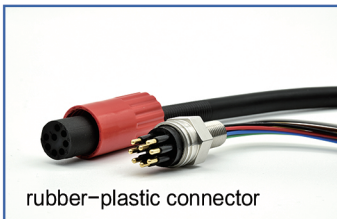
Main products



metal connector



integrated watertight cable



rubber-plastic connector



Underwater Wet-Mate Connector



Application Scenario



Underwater Robot



Fendouzhe



Seafloor Observatory Network



Subsea Oil Production System



Corporate Environment



 021-56753306



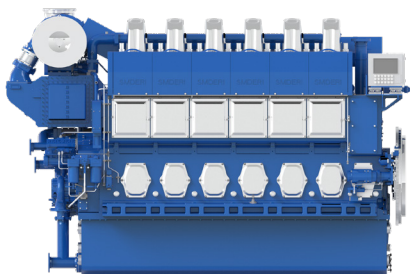


Marine intelligent medium-speed engine

Shanghai Marine Diesel Engine Research Institute



Product Advantages



- CS27 intelligent medium-speed engine is the first intelligent medium-speed diesel engine product for ships independently developed by SMDERI in China. Its key components have undergone reliability verification for over ten thousand hours. It features being green, efficient, intelligent and reliable, and its performance indicators have reached the international advanced level among similar products.
- It has a powerful dynamic performance and good economic efficiency under all working conditions.
- Meets the requirements of the current strictest emission regulations.
- It has the functions of fault diagnosis, high reliability and a long service life.
- It adopts a modular design, is simple to operate and convenient to maintain.



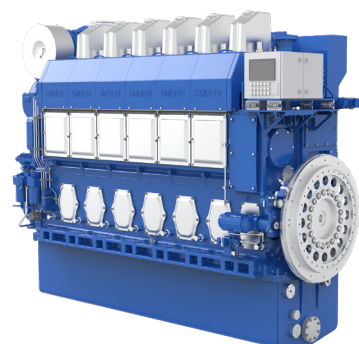
Product Specification

Output				dimensions			
Rated speed	r/min	720	750	Cylinder number	6	8	9
6cylinders	kW	2160	2280	L(mm)	4648	5544	5992
8 cylinders	kW	2880	3040	B(mm)	1863	1863	1863
9 cylinders	kW	3240	3420	H(mm)	3280	3280	3280
				Weight(t)	23	27.8	30.3



Product Installations

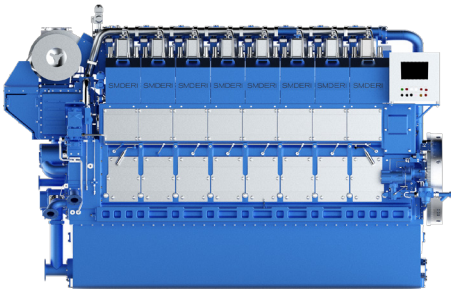
The CS27 medium-speed diesel engine has currently completed the delivery of the first two products. As the main propulsion generator set for the deep-sea science and technology test ship of Taihu Laboratory, the power generation capacity of a single generator set is 2,000 kW, and the rotational speed is within the range of 550 r/min to 750 r/min. At present, the installation and commissioning of the generator set on the actual ship have been completed, and it was delivered to the shipowner in July 2025. The actual operation on the ship is in good condition.



 Marine natural gas engine
Shanghai Marine Diesel Engine Research Institute



Product Advantages



- The CS23G natural gas engine is a green and environmentally friendly product independently developed by the SMDERI. It adopts an intrinsically safe design and features high reliability, a long maintenance cycle and so on. It has obtained the CCS type approval certificate.
- It employs the ignition method of a pre-combustion chamber plus a spark plug.
- The gas system adopts multi-point injection which is flexible and adjustable.
- It utilizes a self-developed and mature control system, which has functions such as air-fuel ratio control and knock control.
- Independent security system.



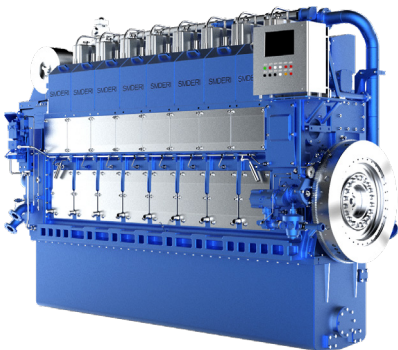
Product Specification

Output				dimensions			
Rated speed	r/min	900	1000	Cylinder number	6	8	9
6 Cylinders	kW	1110	1200	L(mm)	3818	4538	4898
8 Cylinders	kW	1480	1600	B(mm)	1615	1615	1615
9 Cylinders	kW	1665	1800	H(mm)	3157	3157	3157
				Weight(t)	15.3	18.5	20.1



Product Installations

The CS23G natural gas engine has currently completed the delivery of the first batch of products. As a generator set for a land-based power station, there are 8 sets of orders on hand. And as the main propulsion power for river-sea direct bulk carriers, the power of a single engine is 1,800 kW and the rotational speed is 1,000 r/min.



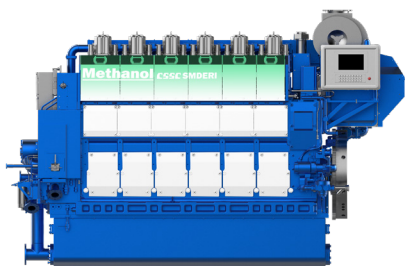


Marine methanol medium-speed engine

Shanghai Marine Diesel Engine Research Institute



Product Advantages



- The CS21 marine methanol-fueled medium-speed engine is a new generation of green and low-carbon marine engines independently developed by the 711 Research Institute in response to the national dual-carbon strategy. The maximum substitution rate of methanol can reach 95%, and the power range covers 1-2MW.
- When using green methanol, the maximum carbon reduction rate can reach 95%.
- Both methanol and diesel dual fuels adopt in-cylinder direct injection and electronically controlled injection.
- Flexible switching between dual fuels is available.
- Meets the Tier II and Tier III (matched with SCR) emissions requirements.
- Intrinsically safe design.



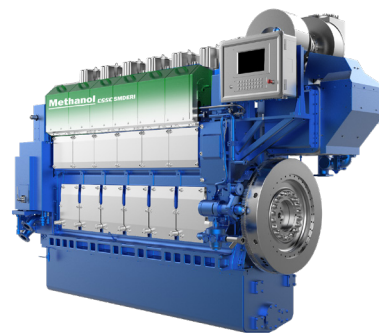
Product Specification

Output				Dimensions			
Rated speed	r/min	900	1000	Cylinder number	6	8	9
6 cylinders	kW	1110	1200	L(mm)	4100	4820	5180
8 cylinders	kW	1480	1600	B(mm)	1800	1800	1800
9 cylinders	kW	1665	1800	H(mm)	3100	3100	3100
				Weight(t)	16	18.9	21



Product Installations

The CS21 methanol-fueled medium-speed engines have completed the delivery of the first two sets of products. Serving as the main propulsion power for inland river 10,000-ton standard bulk carriers, the single-unit power is 1,000 kW. Currently, there are 28 sets of orders on hand, and the ship types involved include ocean-going chemical tankers, river-sea direct bulk carriers, inland river luxury cruise ships, bulk carriers and so on. It is expected that the deliveries will be completed successively in December 2025.

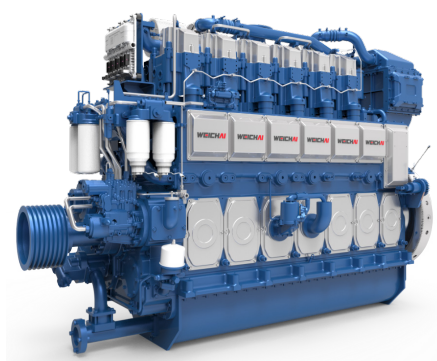


WEICHAI WH20 micro-injection pilot methanol engine

Weichai Heavy Machinery Co., Ltd.



Product Advantages



- The total operating conditions of variable micro-diesel fuel lead to fuel, which contributes less than or equal to 10% of fuel energy.
- Leveraging diesel high-pressure common rail micro-injection ignition technology and Weichai's proprietary ECU control system, precise injection management of both fuel and methanol is achieved. This results in more stable combustion and reduced fuel consumption.
- The intrinsically safe design concept, with multi-point injection arrangement for the methanol intake manifold, has undergone thorough durability tests, making it safer and more reliable.
- By integrating simulation virtual development and test and measurement technologies, the methanol injection structure, combustion chamber, camshaft phase, and turbocharger matching were optimized.
- The structure became more reasonable and the mixture combustion was more thorough. The Kmost body uses creep ink cast iron, rationally stiffening ribs, high strength, and high safety factor, and uses Weichai global quality supplier system, Ensures reliable parts quality.



Product Specification

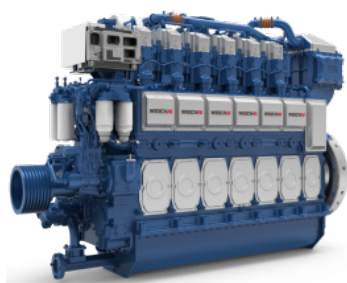
Type	Bore×Stroke	Cylinder Number	Displacement
In-line,turbocharged and intercooled	200×300 (mm×mm)	6	56.55 (L)
Technology routes	Minimum fuel consumption rate	Average piston speed	Weight
Electronically controlled high pressure common rail,Gas multi-point injection	460g/kW·h	10(m/s)	9500kg
Model	Rated Power	Speed	Emission
6WH20LC1225ME1A1	900	1000	China stage II
6WH20LC1360ME1A1	1000	1000	
6WH20LC1496ME1A1	1100	1000	

WEICHAI WH20 LNG micro-jet pilot gas engine

Weichai Heavy Machinery Co., Ltd.



Product Advantages



- The total operating conditions of variable micro-diesel fuel lead to fuel, which contributes less than or equal to 5% of fuel energy.
- It adopts diesel high-pressure common rail micro-injection ignition and Weichai's independent ECU control technology to achieve precise control of fuel and gas injection, ensuring more stable combustion and lower fuel consumption.
- The intrinsically safe design concept, with multi-point fuel injection arrangement in the gas intake manifold, has undergone thorough durability tests, making it safer and more reliable.
- Pilot diesel fuel can form multiple sources of ignition, releasing more than 1,000 times the energy from spark plug ignition. Gas fuels spread flames faster and have better surge performance.



Product Specification

Type	Bore×Stroke	Cylinder Number	Displacement
In-line,turbocharged and intercooled	200×300(mm×mm)	6	56.55 (L)
Technology routes	Minimum fuel consumption rate	Average piston speed	Weight
Electronically controlled high pressure common rail,Gas multi-point injection	186g/kW·h	10(m/s)	9500kg
Model	Rated Power	Speed	Emission
6WH20LC1230NG1A1	905	1000	China stage II
6WH20LC1360NG1A1	1000	1000	
6WH20LC1496NG1A1	1100	1000	



Product Installations

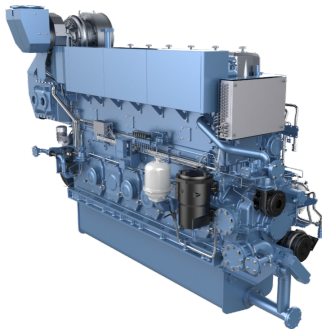
In order to implement the national strategy of Carbon Pea king and Carbon Neutrality, Weichai Group has developed the WH20 LNG single-fuel micro-jet pilot gas engine, which it has developed with the Yangtze Shipping Group, Chongqing Shipping Company and Minsheng Company and other well-known enterprises have carried out in-depth cooperation and have cumulatively supported. The application was supported by more than 10 in 130-meter river transport vessels, such as Chang Hang Huo Yun 002/003/005, with a cumulative operating market of more than 22,000 hours.



WEICHAI **WH28 Diesel Engine for Marine**
Weichai Heavy Machinery Co., Ltd.



Product Advantages



- Safe and reliable, with a product overhaul period of 35,000 hours.
 - Powerful and efficient, featuring an advanced pulse compression system, enhancing dynamic response and efficiency.
 - Easy to operate, with modular design for peripheral components, ensuring strong maintainability.
 - Economical and fuel-efficient, with high compression ratio pistons, high compression ratio turbochargers, electronic hydraulic governors, and excellent valve timing.
 - High reliability, using imported parts, a high-strength body, and a complete control logic.
- Good adaptability, with the WH28 optional configuration gradually being completed, suitable for various ship types.



Product Specification

Type	Bore×Stroke	Cylinder Number	Displacement
In-line,turbocharged and intercooled	280×410 (mm×mm)	6/8	151/203 (L)
Technology routes	Minimum fuel consumption rate	Average piston speed	Weight
Mechanical single-stage pump	183g/kW·h	10.9(m/s)	29000kg
Model	Rated Power	Speed	Emission
6WH28C2790-6.5	2050	650	China stage II /IMO Tier II
6WH28C3046-7.5	2240	750	
6WH28C3264-8	2400	800	
6WH28C3672-8	2700	800	
8WH28C4080-7.5	3000	750	
8WH28C4352-8	3200	800	
8WH28C4896-8	3600	800	



Product Installations

Weichai Group has further expanded its range of medium-speed high-power diesel engines by jointly developing a new generation of medium-speed diesel engine WH28 with the renowned European research institution (AVL). This engine features high reliability, low fuel consumption and low emissions. It is compatible with multiple market segments, including various types of cargo ships, tugboats, passenger ships, fishing vessels, etc. The longest operating time has exceeded 18,000 hours.

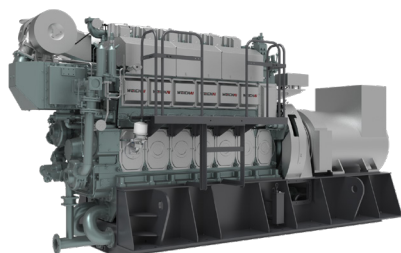


WEICHAI 6WH20 series commercial marine generator set

Weichai Heavy Machinery Co., Ltd.



Product Advantages



- **Reliable and Durable:** The body is made of spheroidal graphite cast iron, which has high strength and a large installation factor; the crankshaft is made of high-strength alloy steel fiber die forging with a fully balanced structure, resulting in low vibration and high reliability. It has undergone 1000 hours of heavy oil operation durability testing on a dedicated test bench to ensure its reliability under heavy oil conditions.
- **Powerful Performance:** Equipped with a high-pressure fuel injection pump that provides excellent atomization and strong power output; a dedicated heavy oil injector improves combustion quality and enhances power response; optimized cam profile and intake passages improve responsiveness.
- **Energy Efficient and Environmentally Friendly:** The lowest fuel consumption rate is lower than that of similar competitors; a three-ring piston plus carbon scraper ring design keeps engine oil consumption as low as 0.5 g/kW·h; high-pressure individual pumps combined with high compression ratio turbochargers ensure thorough air intake and combustion, resulting in low smoke emissions.



Product Specification

Type	Bore×Stroke		Cylinder Number	Displacement
In-line,turbocharged and intercooled	200×300(mm×mm)		6	56.55 (L)
Technology routes	Minimum fuel consumption rate		Maximum piston speed	Weight
Mechanical unit pump	185g/kW·h		10(m/s)	9500kg
Model	Diesel engine Power	Gen-set Power	Speed	Emission
6WH20LCD700-7.2	700	600	720	IMO Tier II or IMO Tier III (Equipped with SCR to Meet)
6WH20LCD700-7.5	700	600	750	
6WH20LCD800-7.2	800	700	720	
6WH20LCD900-7.5	900	800	750	
6WH20LCD1000-9	1000	900	900	
6WH20LCD1200-1	1200	1100	1000	



Product Installations

The WH20 series heavy fuel oil auxiliary engine product is a high-end marine heavy fuel oil power generation product developed by Weichai Group, combining over 70 years of marine engine R&D experience. The product summarizes the main usage characteristics of large commercial ship auxiliary engines and benchmarks against international mainstream products. Since its development in 2023, it has cumulatively delivered more than 100 units, with the longest operational runtime reaching approximately 6,000 hours.



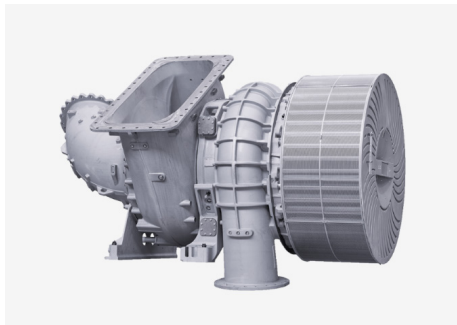
Acce/eron

Turbochargers for Low-Speed Engines in Marine Applications

Accelleron Turbo Systems (Chongqing) Limited



Product Advantages



- The Accelleron A100-L/A200-L series turbochargers are specifically designed for marine low-speed two-stroke engines, covering a power range from 3,000kW to 28,000kW. With high efficiency, high pressure ratios, and wide compressor maps, the turbochargers:
 - a. Meet all technical requirements for current marine low-speed two-stroke engines, suitable for both conventional and alternative fuels (natural gas, methanol, ammonia, hydrogen, etc.)
 - b. Comply with IMO Tier II & Tier III NOx emission limits
 - c. Enhance engine performance and reduce fuel consumption
 - d. Deliver high reliability, prolong maintenance intervals, and reduce operating costs throughout the entire lifecycle



Product Specification

Model	Flow Rate [m³/s]	Pressure Ratio	Efficiency (%)
A255/260-L	5.5—12.2	5.0	75%
A165/265-L	7.6—17.3	5.0	75%
A170/270-L	10.2—23.2	5.0	75%
A175/275-L	17.8—34.0	5.0	75%
A180/280-L	18.8—43.7	5.0	75%
A185/285-L	23.4—48.9	5.0	75%



Product Installations

The A100-L/A200-L series delivers exceptional performance and reliability, making it the preferred turbocharging solution for low-speed two-stroke marine engines. Our Chongqing production facility is Accelleron's sole manufacturing center of complete series of turbochargers for low-speed engines, serving ocean-going vessels in China and globally.

Accelleron turbochargers power many pioneering Chinese-built vessel types, e.g. COSCO SHIPPING's 24,000 TEU ultra-large methanol dual-fuel container ships and the world's first methanol dual-fuel intelligent VLCC (306,000-ton very large crude carrier). We are also deeply involved in the development of Chinese domestic low-speed engines, including alternative-fuel ones. China's first LNG DF, first methanol DF, and first ammonia DF low-speed engines are all powered by Accelleron turbochargers.

2024 market share: 68% domestic low-speed marine market, over 50% international market.

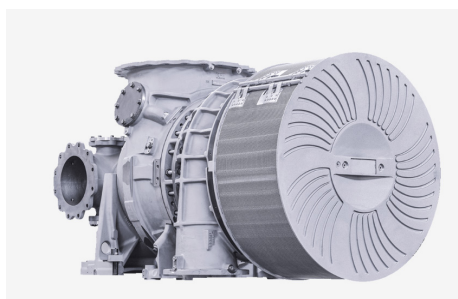


Accelleron Turbochargers for Medium-Speed Engines in Marine and Offshore Applications

Accelleron Turbo Systems (Chongqing) Limited



Product Advantages



- The Accelleron TPS, TPL, CRRMS, and A100-M series are designed for medium-speed four-stroke engines (500kW-10,000kW), suitable for marine and offshore applications including marine main/auxiliary engines, offshore platforms, and engineering vessels (dredgers, wind turbine installation vessels).
- Features include high pressure ratios, high efficiency, and wide compressor maps that enable medium speed engines to achieve high power density, efficiency, and low emissions. CRRMS is specifically developed for China's inland waterway, coastal, and fishing markets, optimizing engine part-load efficiency and load response.
- Compatible with conventional and alternative fuels (natural gas, methanol, ammonia, hydrogen, etc.)
- High reliability and extended service life to reduce lifecycle operational costs.



Product Specification

Model	Flow Rate [m ³ /s]	Pressure Ratio	Efficiency (%)
TPS	0.8-6.0	4.7	67%
TPL	4.5-12.0	4.7	67%
CRRMS	1.0-4.3	5.5	68%
A100-M	1.0-16.0	5.8	68%



Product Installations

Accelleron's medium-speed marine turbochargers have achieved localized production. With leading technology and a comprehensive service network, we are committed to supporting the sustainable development of China's marine industry.

Our turbochargers power many groundbreaking vessels including ocean drilling vessel "Dream", Yangtze River's first pure LNG-powered 10,000-ton bulk carrier (Changjiang Freight 005), and 100,000-ton deep-sea aquaculture vessel "Guoxin No.1", 6,000m³ self-propelled trailing suction hopper dredger "Changjiang 11", and deep-sea green intelligent technology test vessel "Future".

Current market share: 51% domestic market, 45% international market for marine and offshore medium-speed turbochargers.



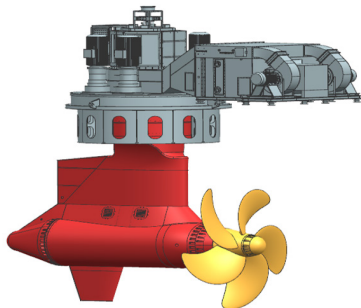


Podded Propulsor

No.704 Institution of CSSC



Product Advantages



- Fewer power transmission links and high comprehensive energy efficiency
 - Save cabin space and facilitate the optimal layout of the cabin
 - Permanent magnet motor drive, high propulsion efficiency
 - Integrating propulsion and rudder, good maneuverability
 - Low vibration and noise, high stealth
- Introduce the features and advantages of the product.



Product Specification

TYPE	Types of thrusters	POWER MW	Blade diameter m	Speed kn
S-POD300L/T	Pull propeller	1.3~2.3	1.9~3.3	23
S-POD500L/T		2.3~3.55	2.2~3.8	
S-POD650L/T		3.55~4.8	2.6~4.2	
S-POD1050T		4.8~7.5	2.8~4.6	
S-POD1350T		7.5~10	3.2~5.5	
S-POD1750T		10~13.5	3.5~5.6	
S-POD2450T		13.5~18	4.2~6.3	



Product Installations

- 1, "Zhuhai Cloud" project:
Pod thruster model S-POD300L Rated power 1.95MW, rated voltage 690V, speed 18kn, Quantity: 2 sets, Delivery time: 2022.1
- 2, Scientific research ship:
Pod thruster model S-POD650T, Rated power 4MW, rated voltage 690V, icebreaking grade PC7, Quantity: 4 sets Delivery time: 2024.11





DC Integrated Power Propulsion System

No.704 Institution of CSSC



Product Advantages



- DC system solutions with independent intellectual property rights
- Various self-developed core equipment such as DC distribution boards and generator protection devices
- Two-types of DC system: asynchronous machine + controlled rectifier / synchronous machine + uncontrolled rectifier
- The combination of variable-speed diesel generator sets and power batteries significantly reduces fuel consumption
- Highly integrated, effectively reducing the number of devices, space, and weight
- Optimal allocation of electric energy, allowing access to multiple energy sources
- Switch between shore power without power interruption and different electrical system shore power



Product Specification

Ship name	System type	capacity	Main propulsion power	DC voltage	Delivery time
Zhi fei	1	3MW rating	2*1000kW	1000V	2021.12
Zhuhaiyun	1	5MW rating	2*1950kW	1000V	2022.11
Xiagangtuo 30	1	5MW rating	2*1860kW	1000V	2023.11
Zhi zhen 100	2	7MW rating	2*1500kW	930V	2023.12
Zhi cheng 60	2	5MW rating	2*1100kW	930V	2024.3
Tong ji	1	5MW rating	2*1800kW	1000V	2025.7



Product Installations

The DC integrated electric propulsion system developed by the No.704 Institute has been applied in multiple projects:

The "asynchronous machine + controlled rectification" solution has been applied to ship projects such as "Zhi fei", "Zhuhaiyun", "Xiagangtuo 30", and "Tongji".

The "synchronous machine + uncontrolled rectification" solution has been applied to the "Zhi zhen 100" and "Zhi cheng 60" SOV. This type of solution is fully benchmarked against the advanced international system solutions and has been applied to ship designs by well-known foreign design institutes, achieving good results.



 GH 广海推 **Rim-Driven Thruster**
GH thru. Guangzhou HG Marine CO.,LTD.



Product Advantages



- The Rim-Driven Thruster (RDT) is an advanced marine electric direct drive propulsion device. Its core design integrates the motor stator into the thruster conduit, and the rotor is integrated with the propeller blades, eliminating the traditional shafting and mechanical seal system. This structure features high power density, low vibration and noise, energy conservation and environmental protection, etc. At the same time, it supports full-rotation control, significantly enhancing the maneuverability and space utilization of the ship. Its working principle is to directly drive the propeller to rotate through the electromagnetic force of the motor, and use seawater to naturally cool the motor and lubricate the bearings, avoiding the complex maintenance problems of traditional propulsion systems.



Product Specification

Model	Prop.Diameter(mm)	Rated Power(KW)	Input Voltage(V)
GRM15	150	2	DC48
GRM26	260	5-10	DC48/96
GRM33	330	15-20	DC540/AC380
GRM70	700	80-100	DC540/AC380
GRM110	1100	150-200	DC540/AC380
GRM115	1150	300-500	DC540/AC380
GRM200	2000	1000-1200	DC900/AC690
GRT110	1100	150-200	DC540/AC380
GRT115	1150	300-500	DC540/AC380



Product Installations

HG Marine develops Rim-driven Thruster(RDT) covering 2kW-1200kW, suitable for vessels from yachts to commercial ships. Custom higher-power RDT are available upon request.

These RDT power all-electric ferries ("Shanghai Ferry No.11/12") and the inland law enforcement vessel. HG Marine has entered the global high-end market by supplying megawatt-class RDT to ocean-going fishery processing ships, demonstrating international competitiveness.





Marine SCR System

BlueNavi Co., Ltd



Product Advantages



- SCR series products with independent intellectual property rights effectively reduce nitrogen oxides(NOx) in emission pollution, with emission reduction rate of more than 95%;
- We design dual-purpose reaction device of vertical and horizontal, control structure is flexible, and the single injection system can provide urea injection supply from multiple catalytic converters, which is suitable for medium and low-speed exhaust aftertreatment.
- Meet the domestic ship GB/15097-2016 (Phase II) and International IMO Tier III emission standards;
- Continuous online monitoring system of ship exhaust (CEMS) to realize real-time online monitoring of pollutants from ship exhaust;
- The company's products break the technology monopoly of foreign enterprises, and even surpass in cutting-edge technology, becoming an industry-leading high-tech enterprise;
- The product certification system covers main classification societies, such as CCS, BV, RS, LR and other certifications;
- More than 350 service networks, 7 overseas offices, 24-hour area response, and 2-hour urban service.



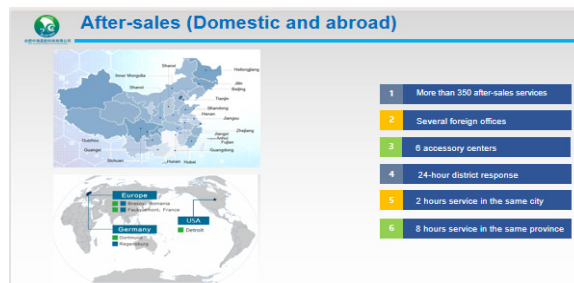
Product Specification

Type	Material	Specification	Notes
No bypass	1) Ceramic SCR 2) Glass fiber SCR	1) 300*300*250, 300*300*300, 300*300*500 2) 231*231*280, 231*231*550	We usually adopt one solution for one ship, customers need to provide the initial engine parameters, we will design and make quotation
Inner bypass	1) Ceramic SCR 2) Glass fiber SCR	1) 300*300*250, 300*300*300, 300*300*500 2) 231*231*280, 231*231*550	
Outer bypass	1) Ceramic SCR 2) Glass fiber SCR	1) 300*300*250, 300*300*300, 300*300*500 2) 231*231*280, 231*231*550	



Product Application

Relying on the strong technical support of ActBlue Group, BlueNavi independently develops exhaust aftertreatment products (SCR systems) such as ship engines, off-road mobile sources, and stationary sources, breaking the technology monopoly of foreign enterprises, and even surpassing it in cutting-edge technology, and supporting SCR products for many well-known engine manufacturers, shipyards and shipowners and other customers. It has won same praise from customers.



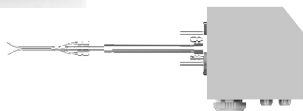
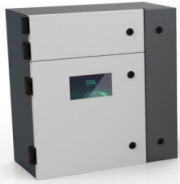
SDL 雪迪龙
环境与工业分析检测专家
股票代码: 002658

Marine Flue Gas Continuous Monitoring System

Beijing SDL Technology Co., Ltd.



Product Advantages



- Accurate measurement of carbon dioxide emissions is realized through standard traceability, calibration transmission, and automated quality control.
- Innovative use of precise time authorization service technology and data authentication technology ensures the reliability, security, tamper-proofness, and traceability of data while assigning unique identifiers to carbon emission data.
- Intelligent quality control enables automatic calibration and verification.
- Modular design concept, high-precision and miniaturized measurement unit, and optomechanical integrated design. Optional cloud platform servers enable data transmission and interaction between monitoring systems and shore-based platforms.



Product Specification

Components	CO ₂ 、O ₂ 、H ₂ O、SO ₂ 、NO、NO ₂
Indicators	Touchscreen that displays real-time instrument status and component concentrations Power Supply: AC(220±22)V, (50±2.5)Hz Operating Temperature: (0 - 50) °C, Relative Humidity: ≤ 90%
Reliability	Insulation Resistance: ≥100 MΩ; Dielectric Strength: 1500V, no breakdown or arcing
Range	CO ₂ & O ₂ : 0~25 %, SO ₂ & NO: 0~50~1000 ppm, NO ₂ : 0~100~500 ppm, Flow Rate: 0~40 m/s Gas Temperature: 0~400°C, Humidity: 0~40 Vol%
Repeatability	≤2%
Accuracy/Linearity	Better than ±2% or ±0.3% F.S. (whichever is greater)
Drift	Zero and Span Drift: better than ±2% F.S.
IP Rating	Analyzer and Sampling Probe: IP56, Pretreatment Unit: IP55



Product Installations

In August 2023, during a shipbuilding project in Qingdao, a consortium of stakeholders—encompassing the shipyard, ship operator, shipowner, construction team, and the SDL Team—collaborated closely to successfully complete the ship carbon emission monitoring system and trusted server project for a 400,000 DWT international cargo ship. The teams conducted site surveys, deployment, construction, installation, commissioning, and testing for 5 sets of ship carbon emission monitoring systems and 1 set of trusted server. This case marks China's first direct measurement case of ship carbon emissions based on direct measurement method combined with data authentication technology.





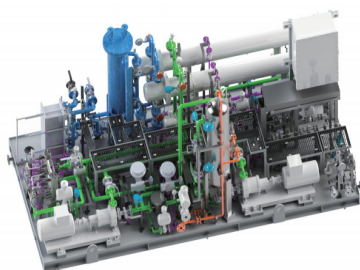
广船国际海科院
 GSI MARINE RESEARCH CENTER

Methanol Fuel Supply System

Guangdong GSI Marine Research Center Co.Ltd



Product Advantages



- Guangdong GSI Marine Research Center Co.,Ltd independently developed methanol fuel supply system(MFSS).The MFSS can compatible for different requirement of methanol fuel consumers and supply methanolfuel to multiple methanol-fueled engines(including two-stroke and four-stroke)and boilers at the same time.
- This product adopts a high-integration and modular design concept. The design team, with rich experience in ship design, fully considers the spatial limitations of ships and divides the entire system into a methanol supply module and a methanol control module. It occupies a small space, is easy to maintain and install, and is convenient for ship installation. The modular design of the MFSS system has excellent adaptability to different ships and can be applied to various ship types such as liquid cargo ships, bulk carriers, PCTCs, and container ships.
- The MFSS system provides multiple functions,including startup,leakage test,standby,running,stopping,purging, inerting,emergency shutdown,etc.,and all those can be operated by one-touch.Its automation control system is based on multi-variable, adaptive feedback control technology,which can automatically adjust the methanol supply temperature, flow and pressure in realtime accordingto the load chang- es of methanol fuel consumers to ensure the continuous safe operation of methanol fuelconsumers.



Product Specification

Name	Supply flow (Kg/h)	Supply pressure (Bar)	Supply temperature (°C)	Applicable vessel types
Methanol supply system MFSS-1.0	0~1000	5~10 13±0.5	25~50	Applicable to dry bulk carriers, liquid cargo ships, bulk carriers, PCTC, container ships, etc.
Methanol supply system MFSS-3.0	0~3000		25~50	
Methanol supply system MFSS-6.0	0~6000		25~50	



Product Installations

The MFSS R&D team of GSI Marine had participated in the design,shipbuilding and commissioning of the first methanol dual-fuel ship in China built by GSI,hence the team has accumulated rich experience in the design,control logic,interface information,operation conditions and risk

assessment of methanolfuel supply.By the end of 2024, the first methanol supply system will be successfully completed and undergo sea trials, and then delivered to the shipowner for use. In 2025, 12 sets of methanol supply systems will be completed and delivered to the shipyard.

Methanol Fuel Supply System (MFSS)						
NO.	SHIP NAME	OWNER	PRODUCT	NUMBER	YEAR	CLASS
1	49,500-ton Chemical/productoil tanker	HAFNIA	Methanol fuel supply system	2sets	2023	BV
2	49,500-ton Chemical/productoil tanker	JP MORGAN	Methanol fuel supply system	6sets	2024	BV
3	49,500-ton Chemical/productoil tanker	HAFNIA	Methanol fuel supply system	2sets	2024	BV
4	49,500-ton Chemical/productoil tanker	ASP	Methanol fuel supply system	2sets	2024	BV



Low-voltage Electric Appliance for Marine

Tianshui 213 Electrical Apparatus Group Co., Ltd.



Product Advantages



- The product has overcome the challenges of "extreme environmental adaptability" and "reliability" in the application of ships. It has been entrusted to a third party to complete vibration, tilt and swing, high and low temperature, salt spray, damp heat and mold tests in accordance with the GJB 150A standard, and lightweight impact tests in accordance with GJB 150-1986. Key environmental adaptability tests such as vibration were completed in accordance with GJB 4.8, and qualified test reports were obtained, passed the Marine product appraisal.
- The product accessories adopt a modular design and can be equipped with functional accessories such as auxiliary contact groups to meet the needs of different users; The contactor can be equipped with an overvoltage suppressor module to suppress overvoltage impacts such as surges and lightning strikes.



Product Specification

Name	Model	Parameter	Name	Model	Parameter
AC Contactor	GSC1-JP	Rated working current 9A-95A	Contactor Relay	JZC3-JP	Conventional Thermal current 10A
AC Contactor	GSC2-JP	Rated working current 115A-800A	Contactor Relay	GSJ5-JP	Conventional Thermal current 10A
AC Contactor	GSC5-JP	Rated working current 9A-40A	Miniature Circuit Breaker(MCB)	GSB1-JP	Rated working current 1A-63A
DC Contactor	GSZ4-JP	Rated working current 40A-400A	Molded Case Circuit Breaker(MCCB)	GSM1C	Rated working current 10A-630A
Thermal Overload relay	GSR1-JP	Setting current range 0.4A-80A	Air Circuit breaker (ACB)	GSW1C	Rated working current 100A-1600A



Product Installations

Tianshui 213 Electrical Apparatus has established a complete closed-loop production system from raw materials to components and finished products, that is a "full-function factory". It has already possessed with professional and high-level production capabilities for key components of low-voltage electrical appliances such as metal parts, plastic parts, magnets, springs, coils, contacts, turning parts, intelligent components, trip components, etc. All products produced have passed the national mandatory product certification (CCC), and the leading products have obtained CCS marine certification, EU CE/CB certification, US UL certification, and German TuV certification.

By the end of 2024, 76 enterprises that cooperate with Tianshui 213 Electrical Apparatus including the 701 Institute, 703 Institute, 704 Institute, 705 Institute, 707 Institute, 709 Institute, 712 Institute, 713 Institute, 715 Institute, 718 Institute, 719 Institute of China Shipbuilding Industry Corporation Limited, and 461 Factory, Henan Diesel Engine, etc.





Umbilical Cable Winch

Rudong Hongxin Machinery Co.,Ltd.



Product Advantages



- The umbilical cable contains cables, optical fibers, hydraulic pipes, air pipes, etc., and is used to connect the surface support vessel and underwater equipment.
- Real-time monitoring of cable tension through sensors effectively protects the umbilical cable.
- Precise speed control to adapt to the fine operation of underwater equipment.
- A precise automatic rope laying device that can neatly, closely, and layer by layer wind the umbilical cable.
- Human-machine interface: equipped with a local or remote control console, displaying tension, speed, depth, system status, alarm information, etc.



Product Specification

Drive Mode of Umbilical Cable Winch	Pneumatic, Hydraulic, Electric, Manual
Rated Load Capacity	6kN~500 kN
Maximum Rope Capacity	15,000 m
Operating Environmen	Onshore, Onboard, Underwater
Product Standard	T/CANSI89-2022

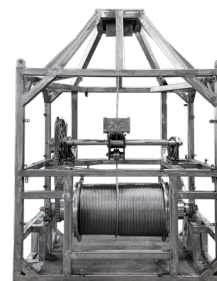


Product Installations

Electric Umbilical Cable Winch
8,000 Meter Ultra-long
Umbilical Cable
Used for the South-North Water
Transfer Project, for the towing
of underwater robots and data
transmission



Underwater Pneumatic
Umbilical Cable Winch
Stainless Steel Housing
Material
The winch can work
underwater and be used
for towing underwater
equipment



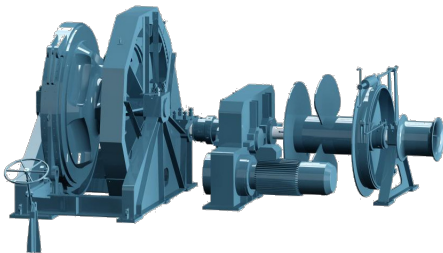


Electro-windlass and Mooring Winch

Wuhan Marine Machinery Plant Co., Ltd.



Product Advantages



- A lightweight and load-adaptive power design, achieving lower weight and reduced power consumption;
- An electrically driven design, achieving reduced operational vibration and lower operating noise;
- Optional digital functions such as one-touch anchoring, ship-shore integrated remote control, remote operation and health detection, adapting to the unmanned ship;
- Custom-built electro-windlass & mooring winches withstand -53°C to adapt low-temperature for polar ship.



Product Specification

Category	Type	Chain Grade	Chain Specification	Rated Mooring Pull	Rated Anchoring Speed	Rated Mooring Speed
Electro-Windlass & Mooring Winch	Frequency Inverter	U2/U3 Type Chain	≥K46	≥5t	≥9m/min	≥15m/min
	Pole-change					
Regular Optional Functions	Auto-Tension			Special Customized Functions	Polar Low-Temperature Environment Adaption	
	Chain Counter					
	Free Anchor Dropping				One-Touch Anchoring	
	Hyd. Brake				Ship-shore Integrated Remote Control	
	Wireless Remote Control				Remote Operation and Health Detection	
	Portable Remote: Pairing...					

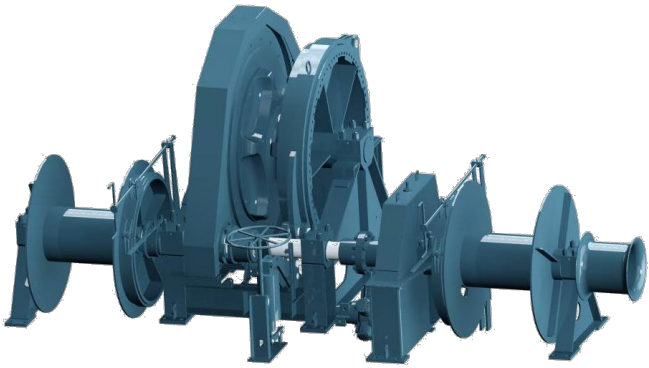


Product Installations

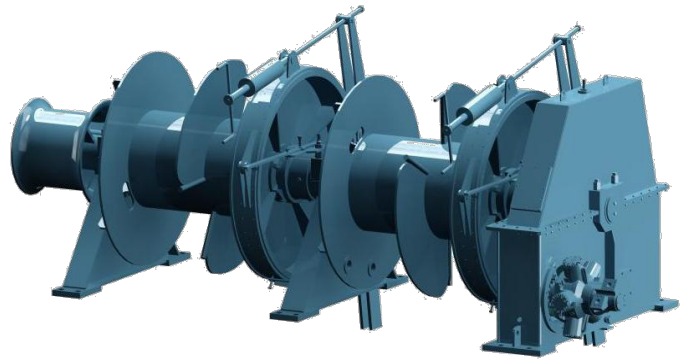
WMMP is the first domestic company to possess independent intellectual property rights for low, medium and high pressure electric hydraulic windlass and mooring winches, frequency inverter type and pole-change type electro-windlass and mooring winches. It is also the first domestic company to realize the real-ship application of digital winches and the verification of -53°C polar low-temperature winches. WMMP is capable of providing a full series of product for various chain diameters and tonnages. By the end of 2024, WMMP had delivered over 13,000 windlass and mooring winches, including more than 1,000 electro-windlass and mooring winches. Its technical capabilities, product sales, and market share have remained at the forefront globally.



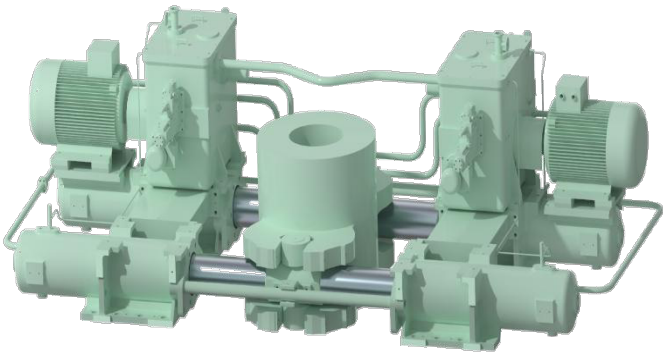
WMMP Marine deck machinery product introduction



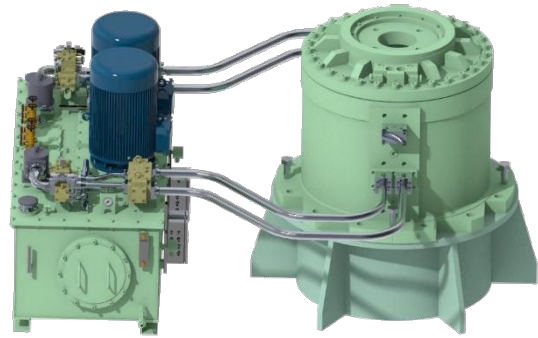
Electric-hyd Windlass



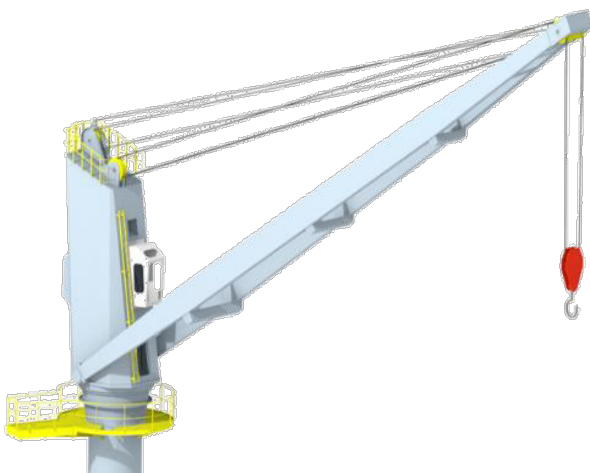
Electric-hyd Mooring Winch



Rapson-Sidle steering gear



Rotary vane steering gear



Single-Jib Crane



Double-Jib Crane



汉盛
HANSUN

Incinerator

Hansun (Shanghai) Marine Technology Co., Ltd.



Product Advantages



- Meets latest IMO Resolution MEPC.244(66)
- Three heating resource available, steam, electric and thermal oil
- Food waste vacuum collection, incineration module option.
USCG approval



Product Specification

Type	Capacity (kcal/h)	kW	Sludge (kg/h)	Solid waste
HSINC-18	180,000	208	22.5	30kg/charge
HSINC-50	500,000	580	63	60kg/charge
HSINC-50A	500,000	580	63	60kg/h
HSINC-80	800,000	929	100	136kg/h
HSINC-100	1,000,000	1162	125	140kg/h
HSINC-130	1,290,000	1491	170	140kg/h



Product Installations

Guangzhou Shipyard 49900DWT Chemical tank, Jinling shipyard 4600TEU, Hyundai Mipo 45000DWT LPG carrier, COSCO Guangdong 7999DWT Methanol refueling ship, CIMC SOE 20,000CBM LNG carrier, COSCO Qidong 154,000DWT SHUTTLE TANKER





汉盛
HANSUN

Fresh Water Generator

Hansun (Shanghai) Marine Technology Co., Ltd.



Product Advantages



- The desalination system offered, featuring both evaporation and reverse osmosis modes, adapted to the needs of various ship types.
- Evaporative systems can be provided single-stage to multi-stage desalination units based on water production requirements. Highly compatible to variety heating sources as jacket water, steam and thermal oil.
- The reverse osmosis system is manufactured in accordance with the standards for marine and offshore engineering. It is used in offshore projects such as drilling platforms, work barges, and platform supply vessels, meeting the daily drinking water and sanitary water needs of offshore workers. It is an economical and reliable method for freshwater production.



Product Specification

Type (Evaporation)	Capacity(T/Day)	Size(LxWxH mm)	Type (RO)	Capacity(T/Day)	Size(LxWxH mm)
FWG-5	5	1240x1020x1130	HSRO-08FD	8	1500x760x1130
FWG-10	10	1400x1050x1500	HSRO-10FD	10	1500x760x1130
FWG-15	15	1700x1400x1700	HSRO-15FD	15	1500x900x1880
FWG-20	20	1700x1400x1700	HSRO-20FD	20	1500x900x1880
FWG-25	25	1700x1400x1700	HSRO-30FD	30	1850x1250x2030
FWG-30	30	1700x1500x1700	HSRO-40FD	40	1850x1250x2030
FWG-35	35	1750x2460x2000	HSRO-50FD	50	1850x1250x2030
FWG-40	40	1750x2760x2000	HSRO-60FD	60	2650x1350x2115
FWG-70D (two-stage)	70	1800x1750x2800	HSRO-70FD	70	2650x1350x2250



Product Installations

Jiangnan shipyard 93000VLAC, Jinling shipyard 15000DWT Oil tanker, Qidong Zhenhua shipyard multifunctional ocean engineering ship, China Merchants Jinling Shipbuilding Jack-up platform, ZMPC 30000m³, CIMC 20,000m³ LNG carrier.



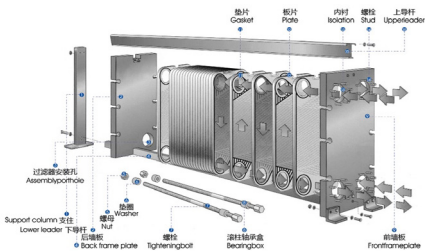


Marine Plate Heat Exchanger

No.704 Institution of CSSC



Product Advantages



- **BR Series Plate Heat Exchanger:** Snap-on gasket design for easy maintenance; rear-extractable filter for quick cleaning; sensor-friendly ports; full system supply available.
- **HBR Welded Heat Exchanger:** Compact structure, high heat transfer efficiency, excellent pressure and corrosion resistance; ideal for demanding applications. All-titanium welded construction; resistant to high temperature, pressure, and corrosion; suitable for seawater, lube oil, refrigerants; compact and reliable, with up to 2000 kW capacity and 2400 m³/h flow rate.
- **Semi-Welded Plate Heat Exchanger:** Combines removable and welded sides; ideal for condensation and evaporation processes; easy to clean and maintain.



Product Specification

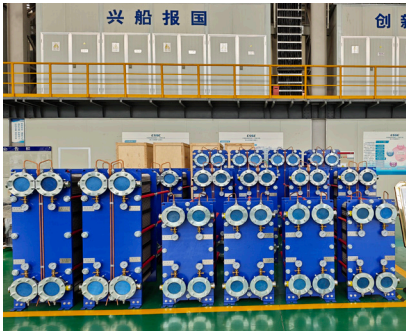
Series	BR Series Plate Heat Exchanger									
Model	BR0.06	BR0.1T	BR0.25	BR0.26	BR0.4	BR0.65	BR0.75	BR0.9	BR1.0	BR1.9
Max Heat Transfer Surface m ²	6	10	40	30	60	220	320	400	450	1060
Max Flow Rate m ³ /h	50	72	200	100	250	380	380	520	520	2100
Max Working Pressure MPa	1.6	1.2	1.2	1.6	1.6	1.6	2.0	1.6	1.6	1.6
Effective Area Per Plate m ²	0.06	0.12	0.25	0.26	0.4	0.65	0.75	0.9	1.05	1.9
Port Dim	DN50	DN65	DN100	DN75	DN125	DN150	DN200	DN200	DN200	DN350
Thickness of Single Plate mm	0.5/0.6	0.5/0.6	0.5/0.6	0.5/0.6	0.5/0.6	0.5/0.6	0.5/0.6	0.5/0.6	0.5/0.6	0.5/0.6
Gasket	Clasp	Clasp	Clasp	Clasp	Clasp	Clasp	Clasp	Clasp	Clasp	Clasp
Series	HBR Welded Heat Exchanger:									
Model	HBR0.2		HBR0.4		HBR0.8		HBR1.3			
Max Heat Transfer Surface m ²	20		50		120		400			
Max Flow Rate m ³ /h	70		170		300		2400			
Effective Area Per Plate m ²	0.2		0.45		0.83		1.3			
Max Working Pressure MPa	2.2		2.2		2.2		2.2			
Thickness of Single Plate mm	0.8/1.0		0.8/1.0		0.8/1.0		0.8/1.0			



Product Installations

As a leading brand in the industry, we have strong technical expertise and engineering experience. Our products are widely used in offshore and marine applications, and we have supplied high-performance plate heat exchangers for various large vessels, earning the trust of our clients.

Project Title	Shipyard	Owner
MV Xue Long 2	Jiangnan Shipyard (Group) Co., Ltd	Polar Research Institute of China
Dayang 2 Oceanographic Research Vessel	CSSC Huangpu Wenchong Shipbuilding Co., Ltd	China Ocean Mineral Resources Research and Development Association
Tansuo 1 Manned Submersible Support Ship	Chengxi Shipyard Co., Ltd	Sanya Institute of Deep-sea Science and Engineering, Chinese Academy of Sciences
3,000-ton Fisheries Resources Survey Vessel	Hudong-Zhonghua Shipbuilding (Group) Co., Ltd.	East China Sea Fishery Research Institute, Chinese Academy of Fishery Sciences
6,000 HP Platform Supply Vessel (PSV)	CSSC Huangpu Wenchong Shipbuilding Co., Ltd	
50,000 DWT Semi-Submersible Vessel	Shanghai Zhenhua Heavy Industries Qidong Marine Engineering Co., Ltd	
Sansha 1 Vessel	Bohai Shipbuilding Heavy Industry Co., Ltd	Sansha Maritime Safety Administration
Fisheries Transport Vessel	Huanghai Shipbuilding Company Limited.	Shanghai Fisheries Research Institute
Lufeng 7-2 Offshore Oil Platform	Offshore Oil Engineering Co., Ltd (Xintian)	China National Offshore Oil Corporation
8,000 m ³ Cutter Suction Dredger	Jiangsu HAIXIN SHIPPING Heavy Industry Co., Ltd.	CCCC Tianjin Dredging Co., Ltd.
6,200 m ³ Cutter Suction Dredger	Jiangsu HAIXIN SHIPPING Heavy Industry Co., Ltd.	CCCC Tianjin Dredging Co., Ltd.
4,200 m ³ Cutter Suction Dredger	Jiangsu HAIXIN SHIPPING Heavy Industry Co., Ltd.	CCCC Tianjin Dredging Co., Ltd.
5,000T Full-Rotation Floating Crane	Shanghai Zhenhua Heavy Industries Co., Ltd.	CCCC Tianjin Dredging Co., Ltd.





Integrated Keyboard for Navigation Radar Control

Shenzhen DAVO Electronic Co., Ltd.



Product Advantages



- Durable Structure**
 Sandblasted, hard-anodized housing with dark gray finish and 3D-zoned design.
- Quality Components**
 Backlit, wear-resistant silicone keys; knob rated for 100,000+ uses; smooth, replaceable trackball.
- Protective Features**
 Power key with safety cover. Dustproof, waterproof, salt spray resistant.
- Wide Temp & Reliability**
 Works from -40°C to $+75^{\circ}\text{C}$; strong vibration resistance; ideal for marine use.
- Standards Compliant**
 Meets IEC60945 & EMC requirements for stable performance.



Product Specification

Product Name	Model	Dimensions (mm)	Interface	Operating Temperature	Protection Rating	Operating Voltage	Operating Current
Integrated Keyboard for Navigation Radar Control	D-5616	418*192*88.7	USB	$-40^{\circ}\text{C}\sim+75^{\circ}\text{C}$	IP65	$5\text{V}\pm 0.3$	100mA



Product Installations

Shenzhen DAVO Electronic Co., Ltd. is a national high-tech enterprise specializing in the R&D, manufacturing, and sales of industrial metal keyboards and high-end input devices. With strong technical expertise and continuous innovation, we integrate product design, intelligent manufacturing, and system solutions.

DAVO was among the first to be listed in the Directories of Selected Maritime Equipment Brands, highlighting our leadership in the metal keyboard industry.

Our self-developed integrated navigation radar control keyboard stands out for its stable performance, practical design, and reliable after-sales support. It has earned wide recognition in the domestic market and established a solid presence in specialized fields.





Marine Fiber Optic Gyro-Compass

CSSC Marine Technology CO.,LTD.



Product Advantages



BLU SUN-50, 60, 70, 80



BLU SUN-110, 115, 120

- **Safety:** All solid state design with no moving parts, ensuring low failure rates. Unaffected by turns, frequent course changes, or power loss.
- **Stability:** The gyro warranty for 5 years, more than 500 sets of shipment, stable and reliable operation.
- **Save money:** The fiber-optic gyrocompass requires no maintenance during its service life, reducing maintenance costs. It delivers high dynamic accuracy and smoother operation, improving autopilot performance and fuel efficiency.
- **Reassuring:** Start-up stabilization time ≤ 30 min; compact size, space-saving, low power consumption, and noise-free.



Product Specification

Name	Model	Heading Accuracy	Attitude Accuracy	Output	Output Protocol	Weight&Dimensions	Stabilization Time
Blue Sun50	MFG-L	±0.75°*secφ	±0.1°	10*RS422 (Expandable)	NMEA0183	≤6kg Φ180mm*190mm	Quay start≤10min All conditio≤30min
Blue Sun60	MFG-III	±0.5°*secφ	±0.05°	21*RS422 (Expandable)			
Blue Sun70	MFG-IV	±0.4°*secφ	±0.05°				
Blue Sun80	MFG-V	±0.1°*secφ	±0.01°				
Blue Sun110	MFG-I	±0.5°*secφ	±0.05°				
Blue Sun115	MFG-M	±0.3°*secφ	±0.03°				
Blue Sun120	MFG-H	±0.1°*secφ	±0.01°	≤11kg 280mm*203mm *187mm			



Product Installations

The "Blue Sun" series fiber optic gyrocompass represents a new generation of marine gyrocompasses independently developed by leveraging our cluster advantages in fiber optic communication technology. It features rapid start-up, high heading accuracy, completely maintenance-free operation throughout its lifecycle, and provides vessel attitude information. Since its initial installation in 2013, the "Blue Sun" fiber optic gyrocompass has demonstrated over a decade of stable operation. Nearly 500 units have been installed on civilian vessels worldwide, and the system has obtained certification certificates from both CCS and DNV classification societies. With a global service network spanning over 50 locations and covering more than 100 major international ports, CSSC Marine Technology Co.,Ltd. stands ready to safeguard navigation for oceangoing vessels and deliver more professional services.





GRE pipelines system

Suzhou JiuMei fiber glass



Product Advantages



- Super corrosion resistance, better cope with chemical and marine high corrosion environment
- Lightweight, only 1/4 of the weight of steel pipes of the same specification, easier to transport and install in special environments
- Flexibility and overall stability, by changing the resin system, fiber type, flexible design of the physical and chemical properties of the pipeline to meet specific needs
- Better fire and heat resistance, fire rating has Level 1, JET FIRE, Level 3
- Longer service life than similar products, low maintenance cost.



Product Specification

Model	JM260(C)	JM360(C)	JM660(C)
Nominal Size (mm)	25to2000	20to1300	20to800
Nominal pressure at 20°C	1.6Mpa	2.5Mpa	4.0Mpa
Nominal External Pressure	0.4Mpa	0.5Mpa	0.7Mpa
Maximum Working Temperature	100°C	100°C	100°C



Product Installations

- 1: Keppel Heavy Industries 3500m³ TSHD dredger bilge water, seawater backwash system
- 2: CSSC Dalian Shipbuilding Heavy Industry Marine Engineering Offshore Oil 982 non-hazardous area discharge, deck water, tank ventilation, water generator water making system
- 3: China Merchants Jinling (Nanjing) 12000TT-RORO ro-ro ship ballast water, bilge water, external drainage, desulfurization, seawater cooling, black and gray water, water tank ventilation, empty tank ventilation system
- 4: Zhanjiang Nanhai Western Petroleum (CNOOC) Weizhou Platform Project Fire protection system, domestic sewage system





Electrical deep well pump

Wuhan Marine Machinery Plant Co., Ltd.



Product Advantages



- Variable frequency control and stepless speed.
- It is intrinsically safe for that the motor is on the deck with no electrical signal in the liquid cargo tank.
- Rotor components feature oil-immersed lubrication and cooling, offering strong heat dissipation with a simple and reliable structure.
- Rotary seal design provides simple, reliable sealing and long service life.
- Integrated isolation monitoring design tracks seal status while preventing cross-contamination between cargo and lubricating oil.
- High efficiency, low noise, easy installation, and low maintenance costs.



Product Specification

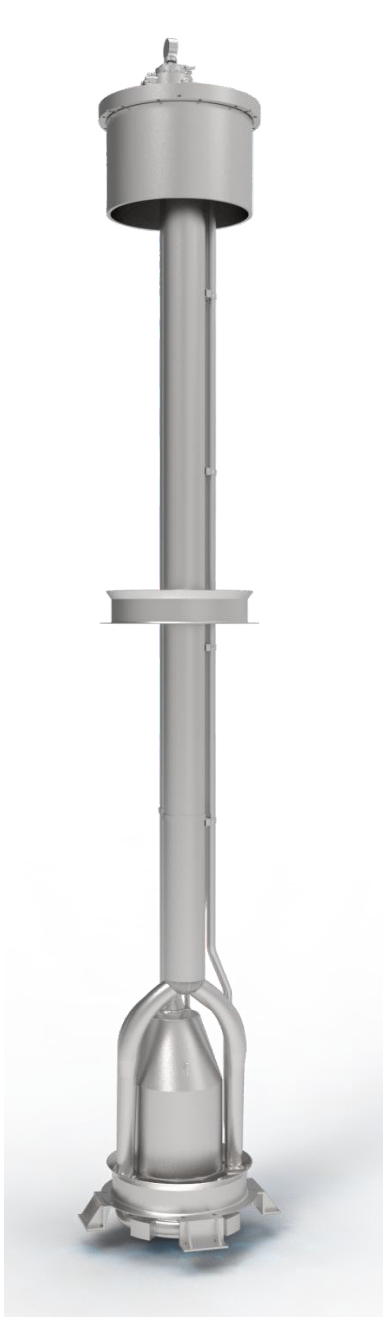
Specification	Capacity m ³ /h	Head m	Rotational speed/ rpm	Water efficiency %
WDP80	75	110	3550	69.5
WDP100	150	110	3150	76.6
WDP150	300	120	3042	77.8
WDP200	550	120	2244	79.7
WDP250	700	150	2355	80.5
WDP300	1000	150	1970	81.5



Product Installations

Wuhan Marine Machinery Co.,Ltd. is a professional supplier of electric deep well pump systems. Its products deliver maximum single-pump flow rates of up to 1000 m³/h, meeting the configuration needs of various chemical tankers, product tankers, FPSO and other liquid cargo vessels. The company has established partnerships with renowned domestic shipping enterprises. By the end of 2024, nearly 100 units of electric deep well pump had been delivered, with both product sales and market share growing steadily year by year.





WHP Hydraulic submerged pump



WSB Hydraulic submerged



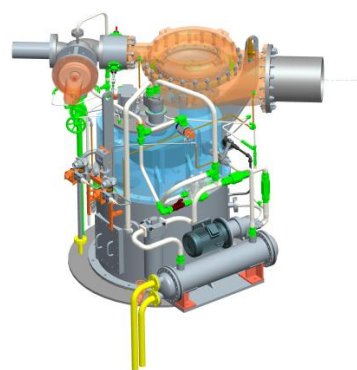
ballast pump

DCP LPG



pump

WCP Cargo pump



WST Turbine


CMES-HVAF®

CSSC Shanghai Marine Energy Saving Technology Co., Ltd.



Product Advantages



- HVAF is a kind of ESDs fitted with small fins on the boss cap and rotates with the propeller together. HVAF can recover the energy loss of propeller hub vortex in the propeller downstream.
- Because of the advantages of simple structure, safety, reliability and convenient installation, HVAF has been widely installed onto thousands of new building and exiting essels.
- HVAF can save fuel consumption by 2%~5% as operating at the same speed.



Product Specification

Sea Trial Verification			
Vessel Type	Dwt	Energy Saving	Fuel Savings/Day(T)
Bulk Carrier	57,000DWT	3.3%	1.0
Ore Carrier	400,000DWT	2.8%	1.8
Oil Tank	308,000DWT	3.5%	2.2
Container	96,00TEU	3.8%	4.5
Fish Ship	30,000DWT	3.5%	0.77
Ro-Ro Ship	4,300PCTC	3.6%	1.6



Product Installations

Vessel Type	Dwt	Application Quantity
Bulk Carrier	1000~400000DWT	1357
Lng	2000~320000DWT	317
Container	64~20000TEU	169
Others	300~147000DWT	160
Total		2003



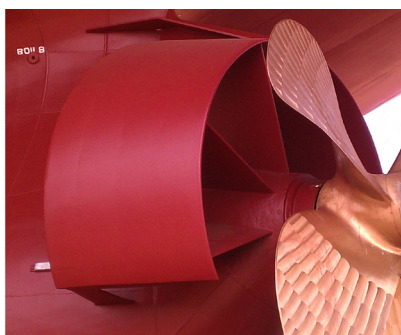


CMES-PSV®

CSSC Shanghai Marine Energy Saving Technology Co., Ltd.



Product Advantages



- PSV is a kind of ESDs installed onto the stern before the propeller. It consists of a wake improving duct and several pre-swirl vanes.
- PSV can collect more flow and produce pre-swirl flow into the propeller disc which essentially reduces the rotational losses in the propeller slipstream and increases the flow velocity towards the propeller.
- The expected power reduction of PSV is in the range of 3% to 8%.



Product Specification

Sea Trial Verification			
Vessel Type	Dwt	Energy Saving	Fuel Savings/Day(T)
Oil Tank	32,000DWT	5.0%	3.2
Bulk Carrier	18,000DWT	5.1%	2.5
Bulk Carrier	57,000DWT	5.4%	1.5
Chemical Tanker	33,000DWT	5.0%	1.0
Container	10,600TEU	2.3%	2.7



Product Installations

Vessel Type	Dwt	Application Quantity
Bulk Carrier	1000~400000DWT	934
Lng	2000~320000DWT	278
Container	2000~400000TEU	183
Others	300~147000DWT	136
Total		1531





CMES-WAP®

CSSC Shanghai Marine Energy Saving Technology Co., Ltd.



Product Advantages



- CMES-WAP is a device installed on the vessel's upper deck to generate additional thrust using wind energy. Its working principle is Magnus Effect. It consists of outer cylinder, inner tower, foundation, drive and transmission system, control system, etc.
- According to the available deck space, 1 to 6 sets of WAP can be installed with an average energy saving effect of about 3% for per set.



Product Specification

Sea trial results of CMES-WAP® on a 45000DWT Bulk Carrier, 4 sets of rotor systems			
Ballast draft			
Rotate speed rpm	Wind direction	Wind speed m/s	Net effect %
115	55.2	10.9	8.2%
160	51.6	12.3	13.8%
208	52.5	11.7	15.0%
260	54.9	11.3	15.1%
Design draft			
115	308.8	21.6	14.8%
180	312.6	22.4	34.7%
208	314.3	22.7	36.9%
260	301.7	19.2	34.7%



Product Installations

Vessel Type	Dwt	Application Quantity	Model	Type Test	Quantity/ Ship	Energy Saving
Bulk Carrier	45,000	1	2.9*18.6	Immobilization	4	10%
Bulk Carrier	87,000	1	5*25	Removable	2	7%
Ore Carrier	325,000	10	5*35	Dumping	5	12%





CMES-ALESS®

CSSC Shanghai Marine Energy Saving Technology Co., Ltd.



Product Advantages



- Marine Air Layer Drag Reduction System (ALESS) is an innovative energy-saving system. By using the great difference between air and water on density and viscosity, an appropriate amount of air could be injected to the ship bottom through a specially designed air injection system, to generate and keep a thin air layer at the hull bottom. The air layer effectively separates the hull bottom from the water, reducing the ship's wet surface area, then significantly reduce ship's resistance.
- Based on the type of ship application, the net energy saving is 5% to 15%;
- ALESS can be applied to bulk carriers, tankers, container ships and other merchant ships with flat bottom.



Product Specification

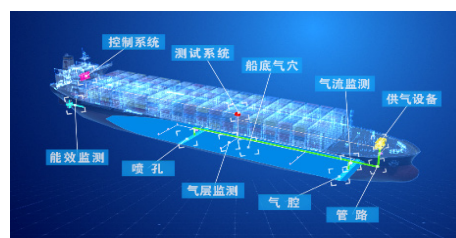
Sea trial Results of ALESS on the 400TEU; Real ship test data after ALESS installed				Real ship data before modification	Net Energy Saving
Blower speed r/min	Ship Speed kn	Shaft Power kW	Air Jet Powe kW	Shaft Power kW	
N1	7.89	590.0	8.59	683.9	12.5%
N2	7.76	580.3	10.37	650.5	9.2%
N3	7.74	584.3	15.75	645.4	7.0%
N4	7.66	579.9	19.16	626.5	4.4%

Economic Performance and Emission Index Prediction of 307000DWT VLCC Based on Operational Test Data										
Loading	Sailing Days/Year	Ballast /Laden	Fuel Consumption	Fuel Price	Net Energy-Saving	Operation Days/Year	ALESS Utilization Rate	Fuel Saved/Year	Fuel Cost Saved/Year	Fuel Cost Saved/Year
	Days		ton/day	US\$/ton	%	Days	%	Ton	US\$	10,000 US\$
Ballast	280	1:1	40	560	8%	140	50%	448	250880	32.14
Laden			45	560	2%	140	50%	126	70560	
Environmental Performance – Emission Reduction (tons/year)			CO ₂		SO ₂		NO _x		Particulate Matter (PM)	
			2112		65		30		1264	



Product Installations

Vessel Type	Dwt	Net Engery-Saving
Container	400 TEU	>7%
Container	334 TEU	>8%
Oil Tank	12,000 DWT	>8%
VLCC	307,000 DWT	~5%



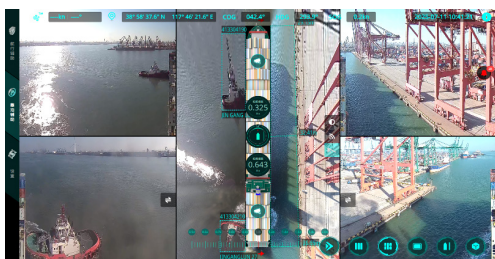


Intelligent Ship Situational Awareness Solution

Marautech Co., Ltd.



Product Advantages



- All Around Coverage**
 360° Situation awareness, no blind area, Apply all detection technologies to identify all potential risks in lookout area
- All Weather Conditions**
 With enhanced visibility in night and foggy conditions for navigation day and night
- All Processes**
 From berthing to navigation, Extended capability on detection, risk identification, route planning, to automatic controlling
- Sea-shore Sharing for All Stakeholders**
 Enabling shipping companies to view vessel's surrounding environment in real time from anywhere.



Product Specification

Functional parameter	Navigation Assistant	Visible horizontal viewing Angle	225°
		Visual recognition maximum distance	6nm
		Classifiable object	Cargo ships, Naval vessels, fishing boats, buoys, passenger ships, etc
		Visual detection delay	<0.5s
	Berthing Assistant	2D BEV Mosaic display	Plane 360°
		3D view splicing, shows rotation Angle	From left to right: 0~360°, Upper and lower angle: 10~80°, Zoom in and out: 0.1~10x
		Berth distance error	Twice the ship width under < 5% ship shore distance
		Static auxiliary line display error	<1m
	Sea-shore Communication	Image resolution and required bandwidth	1080P, 200kb/s



Product Installations

Specialised in AI-enabled visual detection and data fusion technology for maritime industries, Marautech is a leading provider in situational awareness for navigation safety and Maritime Autonomous Surface Ships (MASS). Marautech i-EYE has now covered functions from berthing to navigation, from enhanced visibilities to sea-shore real-time visual communication on most ship types, and has received favorable feedback from leading clients.





Intelligent cabin monitoring and alarm system

Jiangsu Yuanwang Instrument Group Co., Ltd.



Product Advantages



- The intelligent engine room monitoring and alarm system mainly includes the YDKS engine room monitoring and alarm system, YMonitor equipment health management system, FEMS fuel/energy efficiency management system, Cloud intelligent integrated cloud platform, etc. It can realize functions such as parameter monitoring, alarm query, report query, graphical interface display and printing of all ship engine room equipment; functions such as parameter monitoring of vibration sensors deployed on important machinery, typical fault probability prediction, and fault deduction information; the energy efficiency management system meets relevant specification requirements, realizes the calculation of equipment energy consumption, energy efficiency and CII, and can output the voyage energy efficiency level effect evaluation; the cloud platform can realize ship-shore data interconnection, break data silos, realize data coupling, and provide a platform for ship information management.



Product Specification

Indicator Name	Performance
Vibration Sampling Frequency	144kHz
Comprehensive Monitoring Accuracy of Energy Consumption	0.5Class
Intelligent Management of Energy Efficiency	>5%
Accuracy of Equipment Fault Prediction	>95%
Domestic independent and controllable	Up to 100%
Sensor accuracy class	0.1%



Product Installations

The intelligent engine room monitoring and alarm system for equipment failure prediction, also known as the low-carbon intelligent operation and maintenance system and equipment for key ship equipment, is developed by cross integrating vibration state monitoring devices and intelligent energy efficiency management systems through digital twin technology, breaking through the "bottleneck" problem of high dependence on human labor and unsatisfactory energy-saving effects in traditional large-scale ship operation and maintenance systems. The first generation product of the project has been tested and verified by multiple research institutes and enterprises such as Shanghai 704 Research Institute and Yuanyi Shipping. The accuracy of fault monitoring exceeds 95%, energy consumption has been reduced by more than 20%, and each system can achieve nearly one million economic returns for the enterprise. This equipment can be applied to various newly built ships as a whole, and can also be integrated into the intelligent system of the entire ship through independent functional modules. It can be applied to all ships such as bulk carriers, oil tankers, container ships, engineering ships, etc., with broad market prospects.





Ship Oil-Water Intelligent Management System

Shanghai ZhouYi Mechanical and Electrical Equipment Co., Ltd.



Product Advantages



- **Features:** This system utilizes Internet of Things, big data, and artificial intelligence technologies to conduct ship-shore integrated "real-time, online, digital, and visual" intelligent monitoring and management of ship oil and water inventory, variables, operation processes, and operation results.
- **Advantages:** Comprehensive data collection, algorithms tailored to offshore conditions, precise and stable data, mature data interface technology, capable of data exchange with various automated and intelligent systems on board and shore-based big data platforms. The system integrates the functions of "Ship Liquid Level Monitoring and Alarm System", "Ship Intelligent Energy Efficiency Management System", "Ship Loading Computer", and "Intelligent Ship Data Base", offering exceptional value for money.



Product Specification

Name	Model	Performance	Core Functions
Ship Oil-Water Intelligent Management System (Marine Oil-Water Steward)	O&W_V1.1	< 5‰ Uncertainty	Real-time monitoring of marine fuel inventory and consumption variables empowers vessel operators with precise control over their largest operational cost.
Shipboard Energy Consumption & Carbon Emissions Real-time Monitoring System	O&W-V2.1	< 3‰ Uncertainty	Real-time monitoring of vessel's actual energy consumption and carbon emissions, automatically generating IMO/EU-compliant "Voyage Carbon Emissions Declaration Report".



Product Installations

- | | |
|---|------------------------|
| 1. COSCO SHIPPING Energy Transportation Co., Ltd | (WANG CHI) |
| 2. China Merchants Energy Shipping (CMES) Ming Wah Shipping Co., Ltd. | (PACIFIC VITALITY) |
| 3. China Oilfield Services Limited (COSL) | (HAI YANG SHI YOU 616) |
| 4. Shanghai Port Fuxing Shipping Co., Ltd. | (HAI GANG 61) |
| 5. SAIC Motor Anji Logistics Co., Ltd. | (ANJI211) |
| 6. Fujian Guohang Ocean Shipping (Group) Co., Ltd. | (Guoyuan 701) |
| 7. Zhangjiagang Haizhi Shipping Co., Ltd. | (JACOB H) |
| 8. CATHAY TANKER LIMITED | (SNOT LOTUS) |
| 9. Guangxi Wuzhou Tongzhou Shipping & Transport Co., Ltd. | (DONG GUI 18) |

Scan official account

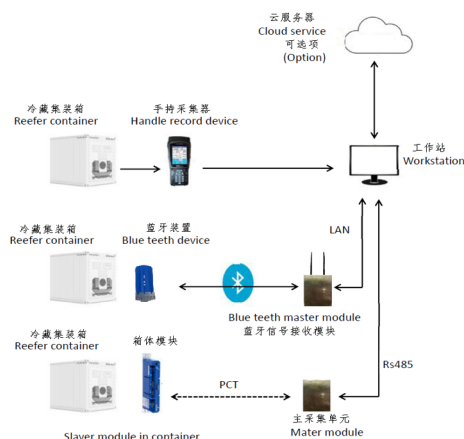


Add: A-466, Shanghai Jiao Tong University-Jinqiao Science Park at No.2588 Jinhai Road, Pudong District, Shanghai
Tel: +86-21-50598922 E-mail: lyz@joystc.com

CSSC HEISHIN Reefer Container Monitoring System(PCT) GWS-HSN CO.,LTD.



Product Advantages



- The PCT system has built-in submodules that can collect signals through the main module using power cable carrier. It can be connected to the loading computer to read the box location information of the loading computer. The data can be selected to be uploaded to the shore based cloud server through the ship's satellite network. Each distribution box has a main collection unit, and the system can display ISO 10368 defined signals such as supply air temperature, return air temperature, set temperature, alarm, etc. Each cold box temperature can form a historical curve for query and analysis.
- Breaking the monopoly of foreign technology, products have formed domestic substitution, with significant competitive advantages in price and service. This not only solves the bottleneck problem, but also has a profound impact on correcting economic and social benefits. Introduce the features and advantages of the product.



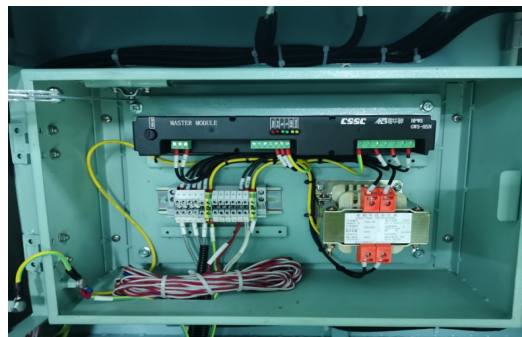
Product Specification

Specification	The product mainly consists of a monitor, a PC host, UPS, It consists of an alarm unit, printer, handheld terminal, and several RMM acquisition modules.
Parameter	The system designs a mimic diagram based on the container loading diagram to monitor the operation of the refrigerated container. Each refrigerated container can display a separate detail page and modify the set temperature on this interface.



Product Installations

This product has been practically applied on container ships such as 1250TEU/1600TEU/1700TEU/1900TEU/2700TEU/4300TEU, with good feedback on its usage status. The customer base covers domestic and foreign shipowners, mainly including Asia Pacific Shipping, Evergreen Shipping, MSC, etc.





Container lashing system
Dalian Shidao Industrial Co., Ltd.



Product Advantages



- Excellent Safety Performance:Product design prioritizes absolute safety while reducing operational intensity, ensuring stability in container transportation.
- Efficient and Streamlined Operation:Revolutionizing from manual to fully automated systems, significantly shortening terminal operation time and enhancing vessel turnaround efficiency.
- Extreme Environment Adaptability:Utilizing low-temperature resistant materials (supporting -40°C polar navigation) to meet operational demands in complex global maritime environments.
- Full Industrial Chain Quality Control:Covering precision casting, machining, final assembly, and testing processes to ensure consistent product quality and reliability.
- Global Technology Benchmark:Key performance indicators comply with international classification society standards, with technical capabilities and industry influence leading globally.



Product Specification

Twist Locks	Fits standard containers, multi-size fastening.
Lashing Rods and Turnbuckle	Length-adjustable, adapts to lashing spacing.
Modular Fixed Fittings	Bases/brackets for hull/container installation.
Lashing Solutions	Custom lashing systems (rods, chains) for ultra-large ships.
Mock Up Test	Tests lashing performance under extreme sea conditions.
Tensile Strength	≥500kN (twist locks) for extreme load safety.
Shear Resistance	≥420kN (twist locks) against lateral forces.
Cold Resistance	-40°C toughness for polar routes.
Fatigue Life	Optimized for prolonged cyclic loading,corrosion Protection: 36+ months salt-fog resistance.



Product Installations

3-year average sales growth rate: 51.91%
Preferred partner for global shipping leaders: Maersk, MSC, COSCO, Hyundai Heavy Industries
" Lashing Rod Mechanism" recognized as Liaoning Province's specialized & innovative product
Awarded "National Manufacturing Champion Enterprise" in 2022 for anti-fall lashing system excellence



Add: No.7 Tianshou Street, Economic & Technological Development Zone, Dalian 116600, China
Tel: +86-411-39251767 E-mail: sunny.sun@shidaoindustry.com



Marine Liquefied Gas Tank

Nantong CIMC Sinopacific Offshore & Engineering Co., Ltd.



Product Advantages



- All IMO TYPE A/B/C tanks for diverse cargo: LNG, LEG, LPG, LNH3, LCO2 etc.,.
- Based on nickel steel, SOE keep developing and innovating different material solution for different scenarios, such as High-Mn steel, Stainless Steel. In house design team with patented design software
- The company has developed stacked-bilobe/vertical bilobe/ trilobe tank shapes to adapt to the needs of alternative fueled vessels and gas carrier, providing customized services.
- Modular fabrication process shortens lead time; advanced welding ability & strict NDT requirement ensure welding performance and product quality.
- Design and production certified and approved by major classification: DNV/BV/LR/ABS/CCS/ASME etc.



Product Specification

Type	Cap.	DP	DT	Material	Size	SLM	AS
Prismatic Liquefied Cargo Tank (Type A)	14634m ³	0.275 barg	-52°C	LT-FH32	39.2*26.9*15.24(m)	LPG、NH ₃	MGC
Prismatic Fuel Tank (Type B)	13000m ³	0.7 barg	-163°C	X7Ni9	21.36*28.3*22.115(m)	LNG	Large Dual - Fuel Container Ship
Vertical Bi-lobe Tank (Type C)	4650m ³	6 barg	-163°C	X7Ni9	11.8*19.2*27.2(m)	LNG	Dual - Fuel Container Ship
Ammonia Tank (Type C)	3000m ³	3.5 barg	-40°C	LT-FH36	31*12*12(m)	NH ₃	Large Dual - Fuel Bulk Vessel
Stacked Bi-lobe Tank (Type C)	7500m ³	5.15 barg	-163°C	X7Ni9	37.65*14*24.2(m)	LNG	Large Dual - Fuel Container Ship



Product Installations

Since its establishment in 2006, the company has supplied marine liquefied gas storage tanks to global shipyards and leading engineering companies such as CSSC, China Merchant, COSCO shipyards, Changhong International Shipyard, Samsung Heavy Industries, Namura shipbuilding, Wartsila and TGE Marine, with products applied in alternative fueled ships.

Till June 2025, SOE have delivered more than 400 pcs tanks and more than 100pcs in hand, keep leading in the tank market.





Marine Liquefied Gas Storage Tank

Jiangsu Watts Energy & Engineering Co., Ltd.



Product Advantages



- **Reliable safety performance:** Made of high-strength/cryogenic nickel steel, ensuring structural stability under extreme pressure and temperature.
- **High storage efficiency:** Liquefaction tech maximizes storage capacity vs. gaseous storage, optimizing ship space and transport efficiency.
- **High space utilization:** Custom-shaped tanks (e.g., tapered or tri-lobe) fit hull spaces, boosting storage and utilization.
- **Superior thermal insulation performance:** Excellent thermal insulation maintains cryogenic conditions for LNG/low-temperature cargo.
- **Smart Monitoring:** Advanced controls track pressure, temperature, and levels in real time for easy operation.
- **Eco-Friendly:** LNG combustion emits near-zero sulfur oxides, particulates, and nitrogen oxides, reducing pollution.



Product Specification

Ship Type	Project Scope	Tank Vol. (Cubic meter)	Qty.(Shipset)	Tank Matl.	Tank Type
85,000m ³ VLEC	Cargo tank & CHS	3*24000+1*14000	2	5%Ni	Type C
8,500m ³ LNG Bunkering Vessel	Cargo tank & CHS	2*4100	1	9%Ni	Type C
5,000m ³ LPG Carrier	Cargo tank & CHS	2*2500	4	P690QL1	Type C
7,500m ³ LCO2 Carrier	Cargo tank & CHS	2*3750	4	P690QL2	Type C
FLNG	LPG cargo tank	23220	2	VH32	Type A
16,000 TEU Container Ship	LNG fuel tank	13000	8	9%Ni	Type B
320,000 DWT VLCC	LNG fuel tank	2*3750	4	9%Ni	Type C
158,000 DWT Crude Oil Tanker	LNG fuel tank	2*2550	2	9%Ni	Type C
209,000 DWT Bulk Carrier	LNG fuel tank	2*3100	2	9%Ni	Type C
7,000 CEU PCTC	LNG fuel tank & FGSS	2*2000	6	9%Ni	Type C



Product Installations

Watts Energy is committed to providing innovative energy storage and transportation solutions for the global energy, shipping, petrochemical, and offshore engineering industries. Our global partners and customers include CSSC, COSCO Shipping, Yangzijiang Shipbuilding, SEASpan, Samsung Heavy Industries, Mitsubishi Shipbuilding etc. With the capability for developing and building type-A, type-B, and type-C tanks at all scales for liquefied gas including LNG, LPG, LEG, LCO₂, and Ammonia, we are one of the most capable and innovative companies in the industry.





Marine Research Support System

No.704 Institution of CSSC



Product Advantages



- The SMERI's Marine Research Support System integrates A-frames, cranes, deep-sea winches, and launch/recovery systems. The system deployed on Explorer II features a full-ocean-depth capable A-frame and winch system, utilizing an optimized design with shared hydraulic drives for two cranes and shared frequency conversion drives for three winches, achieving fully integrated system control. Meanwhile, Explorer III's system has overcome critical technical challenges for polar operations, including ice-zone adaptability, safety control, comprehensive monitoring, and emergency support, establishing China's independent IP in ice-capable deep-sea research equipment through successful polar applications.



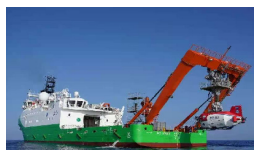
Product Specification

Taking the Explorer III research support system as an example	
A-frame	Safe working load: 100t, equipped with two pulley lifting points, each with a 50t safe working load.
Full-ocean-depth Geological Winch	cable length: 13,000m, operating depth: full-ocean-depth, safe working load: 30t.
CTD Winch	cable length: 10,000m, safe working load: 6t.
Fiber-Optic Cable Winch	cable length: 6,000m, safe working load: 25t. All winches adopt variable-frequency electric drive and use a traction + cable storage configuration. They can operate normally under Sea State 4 during deployment and Sea State 5 during retrieval.
Hydraulic Folding Arm Crane	capacity: 10t @ 20m.



Product Installations

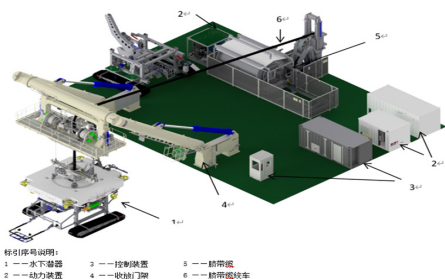
Since first scientific research support system was developed in 2019, Shanghai Marine Equipment Research Institute has made major breakthroughs in deep-sea research equipment. It has supplied over 50 advanced systems including Explorer-series ships and Xiangyanghong 05, serving research needs, establishing itself as an industry leader in marine science technology.



中国中车 **Subsea Intelligent Trencher**
CRRC CRRCSMD (SHANGHAI) Ltd.



Product Advantages



- Utilizes lightweight, modular design with compact structure and outstanding motion performance.
- Provides customized integrated solutions for robots and auxiliary operating systems.
- Supports dual operation modes: jetting and chain cutter.
- Capable of stable operation in Sea State 4 conditions and safe recovery capacity in Sea State 6
- Products and control systems certified by CCS and DNV.
- A fully self-developed R&D, design, and manufacturing ecosystem with secure and reliable supply chains.



Product Specification

Power	Trench Depth (Jetting System)	Trench Depth (Cutter)	Cable Diameter	Track Speed	Depth Rating	Fore/Aft Flying Speed
400hp	0.5 to 1.5m	Not optional	50 to 400mm	0 to 2km/hr	3000m	3.5 knots
600hp	0.5 to 3.0m (with extended sword)	Not optional	50 to 400mm	0 to 2km/hr	3000m	3.5 knots
1000hp	0.5 to 3.0m (with extended sword)	0.5 to 2.0m @ Chain Cutter	350 to 700mm	0 to 2km/hr	2000m	4.0 knots
1600hp	0.5 to 3.3m (with extended sword)	0.5 to 2.0m @ Chain Cutter 0.5 to 1.2 m @ Wheel Cutter	200 to 900mm	0 to 2km/hr	2000m	4.0 knots

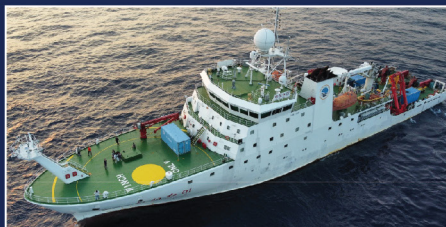


Product Installations

Our products are extensively utilized across multiple offshore sectors including submarine oil & gas pipeline installation, transoceanic communication cable laying, and power cable construction for island electrification projects. They serve leading offshore industry giants such as CNOOC, COOEC, HMN Tech, SBSS, Fiberhome Communication Technology, Brazil Oceanica, and UK Subsea 7. With 68% global market share, we maintain the industry’s confirmed leadership position worldwide.



To meet the demands of subsea heavy-duty operations such as deep-sea oil & gas exploration, salvage and rescue, scientific research, and dam inspection, the team has mastered key technologies including: Integration of deep-sea heavy-duty buoyant operation robots, highly reliable remote power supply and underwater communication, safe launch and recovery in complex sea conditions, semi-autonomous / autonomous operation for typical tasks. Leveraging these advancements, the team has developed: A series of critical subsea components: including underwater valve controls, lighting controls, thruster controls, pressure hulls, pressure compensators, high-strength concrete repair tools, and in-situ scientific operation tools; a product platform for deep-sea buoyant operation robots: establishing a comprehensive lineage of robotic systems (Maximum Operating Depth: 6,000 meters, maximum Power Output: 250 horsepower (HP), stable underwater operation, adaptability to diverse scenarios, high efficiency, simplified operation and maintenance, compact structure and excellent dynamics). The product quality and technological sophistication have been highly acclaimed by clients.



- Product: 150HP ROV
- Depth Rate: 4500 m
- Scenarios: Deep-sea scientific surveys, sediment sampling, seawater sampling, marine organism sampling, and related tasks.



- Product: 150HP ROV
- Depth Rate: 4500 m
- Scenarios: Deep-sea emergency salvage, offshore oil & gas support, etc.



- Product: 2x150HP ROV
- Depth Rate: 6000 m
- Scenarios: Deep-sea resource exploration, scientific drilling, pelagic scientific expeditions, etc

To address the needs of subsea cable laying and inspection, offshore wind farm construction and O&M (Operation and Maintenance), and subsea oil & gas pipeline installation, the team has developed: A high-precision subsea cable burial depth detection system: Capable of both active and passive cable detection modes. Multiple trenching tools and a composite high-efficiency soil-breaking trenching method: Utilizing hydro-jetting, chainsaw cutting, and disc cutting technologies. (Maximum Soil Hardness: 40 MPa, Maximum Cable Burial Speed: 200 - 1000 meters/hour.) Multi-type subsea stable locomotion systems: Incorporating tracks, skids, and thrusters to ensure stable movement on soft, unconsolidated seabeds. Multiple trenching and cable-laying equipment product lines: Towed Plows, Self-Propelled Trenchers, Linear / Drum Cable Engine. (Maximum Trench Depth: >5 meters, Maximum Trench Width: 1.6 meters) These products are stable and reliable, serving clients such as: SBSS, CCS, HMN etc.



- Product: 1000HP ROV Trencher
- Depth Rate: 3 m
- Scenarios: Long-distance subsea optical cable burial, burial of cables and small-diameter pipelines, operation and maintenance (O&M), etc.



- Product: 600HP ROV Trencher
Multi-Functional Cable Burial Plough
- Depth Rate: 3 m / 3.3 m
- Scenarios: Long-distance subsea optical cable burial, burial of cables and small-diameter pipelines, operation and maintenance (O&M), etc.



- Product: 1000HP ROV Trencher Multi-Functional Cable Burial Plough Cable Engine
- Laying Cable: Cable with maximum diameter of 380mm
- Depth Rate: 3.3 m
- Scenarios: Long-distance subsea optical cable burial, burial of cables and small-diameter pipelines, operation and maintenance (O&M), etc.



Marine elevator

Guangdong GSI Elevator Electromechanical Equipment Co.Ltd



Product Advantages



- Marine elevators are products that are continuously optimized and improved based on years of experience in elevator design, production, and installation, combined with favorable shipbuilding environments. They meet domestic and international elevator standards and classification society regulations, are safe, reliable, and have strong environmental applicability.
- Marine elevators include passenger elevators, medical elevators, sightseeing elevators, crew elevators, explosion-proof elevators (explosion-proof lifting devices), escalators, cargo elevators, food elevators, and other types, with a wide range of applications.
- Marine elevators have good comfort and intelligent production operation curves; Advanced driver host, energy-saving and maintenance free; Meet the latest standards,

with complete safety functions such as accidental movement, braking force detection, and door lock short circuit detection; Automatic power outage rescue and emergency escape control, achieving a design that does not trap people; The first domestic elevator dedicated A60 split fire door certification, suitable and beautiful; Remote fault analysis function to ensure the normal operation of the elevator; The world's first to adopt the whole ladder lifting technology, shortening the installation cycle of ship ladders by 70%.



Product Specification

Name	Load Capacity	Speed	Applicable Ship Types	Remarks
Passenger Elevator	800kg~2000kg	0.5m/s~1.6m/s	Cruise, Ro Ro, Sightseeing Ship	Coverage: Sightseeing Elevator
Freight elevator	500kg~5000kg	0.1m/s~1m/s	Suitable for various ship types	With low temperature resistance design
Crew elevator	320kg~1000kg	0.5m/s~1m/s	Suitable for various ship types	Coverage: Service elevator There is a hidden escape ladder
Hospital elevator	800kg~2000kg	0.5m/s~1.6m/s	Medical ship, cruise ship	Equipped with stretcher mooring, car can enter hospital bed, priority call design
Explosion proof elevator	500kg~3000kg	0.3m/s~1m/s	FPSO, special ships, ships with explosion-proof requirements	Coverage: Explosion proof elevator According to the requirements of ship design
Escalator	step width:800mm 1000mm	0.5m/s	Cruise, Ro Ro passenger ship	The angle of the sightseeing boat can be: 30°, 35°
Food elevator	100kg~500kg	0.1m/s~0.5m/s	Suitable for various ship types	Including window sill and flat design
lifting platform	400kg~5000kg	0.1m/s~0.3m/s	Suitable for various ship types with specific needs	Including: Hydraulic drive and Motor drive



Product Installations

We have won awards from SBM in the Netherlands, Dafei in France, Petrobras in Brazil, thanks to our excellent product quality, superb technical strength, and thoughtful service experience MSC With the trust of internationally renowned ship owners such as COSCO Shipping and H-Line, multiple passenger elevators, service elevators, escalators, etc. have been installed on luxury roll on/roll off ships such as Algeria, MOBY, P&O, MSC, and on special ships, semi submersible ships, and container ships PCTC FPSO Bulk carriers and other vessels have products in operation.



DNDT **Marine elevator**
Dongnan Elevator



Product Advantages



- Operate safely in complex marine environments such as horizontal roll, vertical roll and heave, etc.
- Have high IP protection, anti-corrosion, shock resistance and fire resistance features, meeting the requirements for use in ship environments.
- Have flexible structure layout and can provide customized solutions to meet the requirements of elevator shafts for different ship types.
- Be equipped with a special communication system for ships, to achieve information exchange and efficient rescue between ships and elevators.
- Have multiple patented technologies and have been certified by classification societies.



Product Specification

Elevator type	Passenger elevator	Crew elevator	Goods elevator	Observation elevator	Service lift	Escalator
Rated load(kg)	500~2500	350~1000	500~3000	350~1000	100~500	/
Speed(m/s)	≤1.0	≤1.0	≤1.0	≤1.0	≤0.5	≤0.5



Product Installations

Dongnan Elevator Co., Ltd. is an operator of vertical transportation system solutions, a partner of China's aerospace industry, a national specialized, refined, distinctive and innovative enterprise, and a drafting unit of the standards for marine elevators of the state and the Ministry of the Transport. Dongnan has provided services to many scientific research ships, luxury cruise ships, ro-ro passenger ships, LNG ships, container ships, bulk cargo ships, tank ships and other special ships in China, with footprints covering rivers, lakes and seas. Dongnan marine elevator business involves major ship owners around the world, including shipyards such as Dalian Shipbuilding, Hengli, Yantai Raffles, Qingdao Beihai, Yangzijiang, New Times, Hudong Zhonghua, Jiangnan Shipyard, Huangpu Wenchong and Guangzhou Shipyard International, covering certification services from major classification societies such as CCS, DNV-GL, ABS, LR, RINA, BV, KR, NK and RS. Dongnan Elevator provides corresponding products for different ship types, with diverse application scenarios, covering different ship types and navigation areas. With vertical transportation system solutions, it creates the happy space that carries dreams for users.





Marine sanitary unit

Jiangsu Hailu Technology Incorporated Co., Ltd.



Product Advantages



- Revolutionary improvement in installation and construction efficiency.
- Significant advantages in material and structural performance.
- Innovative breakthroughs in environmental protection and energy-saving technologies.
- Convenience of maintenance and operation.
- Future Trends: Intelligence and Multi functional Integration.



Product Specification

Model	Fire-rating class	Dimension	DNV	MED
HL-A	B15	2000*1600*2500	√	√
HL-B	B15	2000*1600*2500	√	√
HL-C	B15	2000*1600*2500	√	√
HL-D	B15	2000*1600*2500	√	√
HL-E	B15	2000*1600*2500	√	√
HL-F	B15	2000*1600*2500	√	√



Product Installations

Jiangsu Hailu Technology Co., Ltd. was founded in 1982 and is a comprehensive enterprise specializing in the production of ship interior materials, land building materials, and general contracting of cruise ship interior engineering. The company produces 10000 sets of sanitary units annually. For many years, the company has provided various products and services to domestic and foreign shipbuilding enterprises and interior decoration companies for various types of ships, marine engineering, and living modules, relying on excellent product quality, favorable product prices, and high-quality after-sales service. Our products have been exported to multiple countries in Asia, Europe, America, and other regions, winning widespread praise from domestic and foreign customers.





Marine fireproof door

Jiangsu Hailu Technology Incorporated Co., Ltd.



Product Advantages



- Excellent core fire resistance performance
- Significant air-tightness and waterproof performance.
- Anti deformation sealing technology.
- Anti explosion performance and structural protection capability.
- Materials and their long-term durability.
- Significant advantages in installation and maintenance.
- Multi functional integration and expansion.



Product Specification

Model	Fire-rating class	Dimension	CCS	DNV	MED	LR	ABS	BV	NK	RS	USCG
CGFM-1D	A60	2150*950	√	√	√	√	√	√	√	√	√
CGFM-1DS1	A60	2200*1000	√	√	√				√	√	√
CGFM-1FS	A60	2750*1200	√	√	√						√
CGFM-1F	A60	2750*1200	√	√	√	√	√	√	√	√	√
CGFM-1EA	A60	2250*2000	√	√	√						
CGFM-2	A15	2400*1200	√	√	√	√	√	√	√	√	√
CGFM-3S	B15	2200*1200	√	√	√		√			√	
CGFM-3A	B15	2100*1900	√	√	√	√	√	√	√	√	√



Product Installations

Jiangsu Hailu Technology Co., Ltd. was founded in 1982 and is a comprehensive enterprise specializing in the production of ship interior materials, land building materials, and general contracting of cruise ship interior engineering. The company produces 80000 sets of fireproof door annually. For many years, the company has provided various products and services to domestic and foreign shipbuilding enterprises and interior decoration companies for various types of ships, marine engineering, and living modules, relying on excellent product quality, favorable product prices, and high-quality after-sales service. Our products have been exported to multiple countries in Asia, Europe, America, and other regions, winning widespread praise from domestic and foreign customers.





Marine HFC-227ea Fire Extinguishing System

Guangzhou Ruigang Fire Equipment Co., Ltd.



Product Advantages



Marine HFC-227ea Fire Extinguishing System

- **Efficient and rapid fire extinguishing:** It can quickly control fires in enclosed spaces of ships (such as battery compartments, engine rooms, cargo holds, and switch rooms). It is particularly suitable for fires caused by container power supplies, electrical equipment, fuel systems, etc. on ships (Class A, B, C, and electrical fires), with strong targeting in fire extinguishing.
- **Clean, environmentally friendly, and no residual damage:** After fire extinguishing, there will be no water stains, dust, or corrosive residues, which will not damage the ship's precision equipment (such as navigation systems, engines), electronic instruments, or goods. It avoids secondary losses and meets the needs of green energy development.
- **Systematic, precise, and intelligent protection:** In response to the spatial layout of container mobile power supplies, our company has launched cabin-level, cluster-level, and PACK-level fire protection solutions. From early fire detection to precise warning and response, the system can directionally spray fire extinguishing agents, achieving precise fire extinguishing, rapid cooling, and continuous suppression of lithium battery fires. It efficiently curbs the risk of fire spread and provides safety guarantees for the sustainable development of ships.



Product Specification

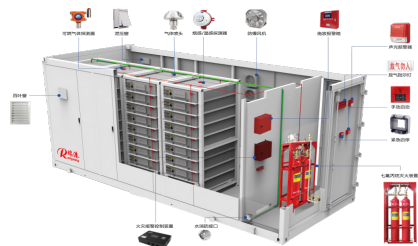
Model	Working pressure	Charging density	Designcon centration	Cylinder volume	Injection time (S)	Fire-extinguishing method
RG-20	2.5/4.2/5.6	≤1.125kg/L	8-10%	20	≤10	Total flooding
RG-30	2.5/4.2/5.6	≤1.125kg/L	8-10%	30	≤10	Total flooding
RG-40	2.5/4.2/5.6	≤1.125kg/L	8-10%	40	≤10	Total flooding
RG-70	2.5/4.2/5.6	≤1.125kg/L	8-10%	70	≤10	Total flooding
RG-90	2.5/4.2/5.6	≤1.125kg/L	8-10%	90	≤10	Total flooding
RG-120	2.5/4.2/5.6	≤1.125kg/L	8-10%	120	≤10	Total flooding
RG-150	2.5/4.2/5.6	≤1.125kg/L	8-10%	150	≤10	Total flooding



Product Installations

Ruigang Fire Protection has been deeply engaged in the intelligent fire protection field for nearly 20 years. It is a national high-tech enterprise and a "Specialized, Refined, Peculiar and Innovative" enterprise in Guangdong Province. It holds certifications from classification societies such as CCS, RINA, BV, LR, and ABS, as well as MED certification for marine fixed local water-based fire extinguishing systems, qualification for marine fire protection maintenance supplier services, and qualification for undertaking national defense equipment contracts.

As a benchmark supporting supplier in the industry, it serves more than 1,000 ships annually, covering large container ships, oil tankers, bulk carriers, LNG carriers, ro-ro passenger ships, offshore oil platforms, scientific research ships, maritime ships, etc. Its cooperative clients include industry leaders such as Guangzhou Shipyard International, CSSC Huangpu Wenchong, Wuchang Shipbuilding, COSCO Shipping, Ningde Electric Ship, Yinghui South, and Jianglong Shipbuilding.



Fire Protection Solutions for Marine Container Mobile Power Supplies



Northsea Helideck

North Sea Offshore Technology (Yantai) Co.,Ltd.



Product Advantages



- As a leading enterprise in China's marine engineering aluminum helideck platform sector, North Sea Offshore (NSO) has always been committed to providing high-performance helicopter takeoff and landing solutions for global vessels and offshore platforms. Our self-developed aluminum helideck system, NORTHSEA HELIDECK, features full independent intellectual property rights and superior engineering quality. It has secured certifications from major classification societies such as DNV, ABS, BV, CCS, LR, and RMRS, while completely complying with international specifications including MH5013-2014, ICAO, SOLAS, CAP437 and etc., and standards such as NORSOK, IMO, and EN. We have established full-industry-chain capabilities ranging from design and R&D to certification services. Through modular design and customized solutions, we provide safe, efficient, and regulatory-compliant helicopter takeoff and landing support systems for various vessel types.



Product Specification

Helideck Type	Material	Equipped System	MTOM	Maximum Size	Installation Time	Service Life
Marine helideck	Aluminum	Lighting system, fire-fighting system, safety net, navigation system	15.6t	26.1M	30 Days	30-50 years
Wave compensation helideck	Aluminum	Lighting system, fire-fighting system, safety net, navigation system, 6-DOF active wave compensation hydraulic helideck	4t	15M	60 Days	10 years (Hydraulic seals or electric cylinders require regular maintenance)
Special operation helideck	Aluminum	Lighting system, fire-fighting system, foldable safety net, navigation system	3t	9M	10 Days	30-50 years



Product Installations

In recent years, NSO has designed and constructed over 150 aluminum helidecks, forging a comprehensive product portfolio that covers diverse offshore scenarios. Notably, our independently developed and manufactured passive fire retarding aluminum helideck has obtained multiple international certifications, attaining world-class technical standards. It has been successfully deployed on landmark projects such as China's first 100,000-ton deepwater semi-submersible oil production and storage platform Shenhai Yihao (Deep Sea No.1) and China's largest scientific research vessel Mengxiang (Dream), demonstrating its outstanding performance and reliability.



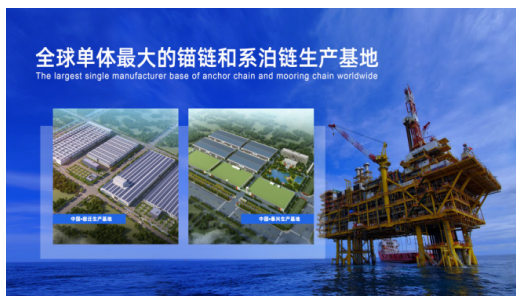


CSAC
中运锚链

ship anchor chain & offshore mooring chain
China Shipping Anchor Chain (Jiangsu) Co., Ltd.



Product Advantages



- Anti-cartel, adhering to market-based pricing, customer first, and helping customers reduce costs and increase efficiency.
- We offer ship anchor chains, offshore mooring chains & shackles, swivels and other mooring system products with diameters ranging from 12.5mm to 220mm.
- The product has been certified by the world's top 10 authoritative classification societies, including ABS, CCS, NK, LR, DNV, BV, KR, RINA, RS and IRS.
- With the world's largest single chain-making factory, it has an annual production capacity of over 500,000 tons and strictly ensures the delivery time of products.
- Internal control standards that exceed national standards and classification society regulations: The industry's first to introduce an extended warranty commitment of 2 to 8 years.



Product Specification

a. 船用锚链 Ship anchor chain



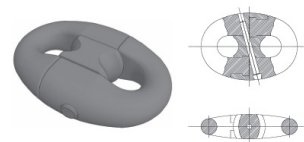
产品 Product	有档锚链 Stud anchor chain	无档锚链 Studless anchor chain
等级 Grade	M2, M3, M4	M2, M3, M4
规格 Size	12.5-220 mm	12.5-220 mm
证书 Certificate	ABS, BV, CCS, DNV, IRS, KR, LR, NK, RINA, RMRS	

b. 海洋系泊链 Offshore mooring chain

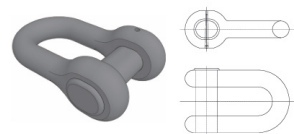


产品 Product	有档系泊链 Stud anchor chain	无档系泊链 Studless anchor chain
等级 Grade	R3, R3S, R4, R4S, R5	R3, R3S, R4, R4S, R5
规格 Size	28-220 mm	28-220 mm
证书 Certificate	ABS, BV, CCS, DNV, KR, LR, NK	

肯特卸扣 Kenter shackle



末端卸扣 ES End shackle



Product Installations

The company's products are highly popular worldwide. 66.8% of its products are exported to 60 or more countries and regions.

The global customers served by the company include DSIC, Hudong-Zhonghua, Shanghai Waigaoqiao, Jiangnan shipyard, Guangzhou Shipyard International, Huangpu Wenchong, Qingdao Beihai, China Merchants Industry, COSCO Shipping heavy Industry, Samsung Group, Hanwha Ocean, Nantong Xiangyu, Shanghai Zhenhua, Jinglu shipyard, Jiangsu New Hantong Ship Heavy Industry, etc., all of which are top-level shipbuilding enterprises in domestic and at abroad, as well as global renowned offshore engineering and shipping enterprises such as CNOOC, Petrobras, MSK, MSC, COSCO Shipping, CMA-CGM, Evergreen, HMM, YangMing, PIL, etc.



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Anchor Chain Mooring Chain

Zhoushan Zhongnan AnchorChain Co.,Ltd.



Product Advantages



- The factory has the world's leading intelligent marine anchor chain and offshore mooring chain automatic chain making unit production line, and is equipped with perfect physical and chemical testing equipment and R & D center. According to the international ISO1704 standard and national standard GB/T549-2017, the factory is capable of producing 14MM-122MM diameter Grade II (M2) and Grade III (M3) marine anchor chains with and without gears, offshore mooring chains, and all kinds of attachments matching with the above anchor chains. It has obtained the factory approval certificates from 8 international famous classification societies in China (CCS), UK (LR), Norway (DNV), USA (ABS), France (BV), Japan (NK), Korea (KR), Italy (RINA), and it is the famous brand product of Zhoushan City, with an annual production capacity of up to 50,000 tons.



Product Specification

Chain Diameter (mm)	Weight Kg/m	BL	Chain Diameter (mm)	Grade	Weight Kg/m	BL
73	116.71	3990	132	AM4	381.59	14509
76	126.5	4300	137	AM4	411.04	15442
78	133.2	4500	142	AM4	441.59	16389
81	143.69	4820	147	AM4	473.59	17348
84	154.53	5160	152	AM4	505.98	18318
87	165.76	5500	157	AM4	539.81	19297
90	177.39	5840	162	AM4	574.74	20284
92	185.36	6080				



Product Installations

序号 Item	采购商 Purchaser	项目 Project	产品 Product	规格 Specification	数量 Quantity	证书 Cert.
1	浙江交工集团股份有限公司 Zhejiang Communications Construction Group Co., Ltd.	舟山跨海大桥 Zhoushan Cross-Sea Bridge	锚链 Arresting Chain	AM3466	15900m	CCS
		舟山岱衢大桥 Zhoushan Daiqu Bridge	锚链 Arresting Chain	BR4452 BM3460	5000m 6200m	
2	舟山长宏国际船舶修造有限公司 Zhoushan Changhong International Shipyard Co., Ltd.	集装箱船 10300TEU Container Vessel10300TEU	锚链 Anchor Chain	AM34114	10 船套 10 Vessel Sets	DNV
		成品油和原油船 115000DWT Product and Crude Oil Tanker115000DWT		AM3492	12 船套 12 Vessel Sets	ABS
3	舟山中远海运重工有限公司 COSCO Shipping Heavy Industry (Zhoushan) Co., Ltd.	63600 DWT BULK CARRIER63600DWT	锚链 Anchor Chain	Φ78	6 船套 6 Vessel Sets	LR
4	新加坡 MEP 公司 MEP DECK SOLUTIONS PTE LTD		锚链 Anchor Chain	AM3473 AM3468	2 船套 2 Vessel Set	ABS/LR
5	太平洋海洋工程（舟山）有限公司 Pax Ocean Engineering (zhoushan) Co., Ltd.	1200 TEU 集装箱船 1200TEU CONTAINER VESSEL1200teu	锚链 Anchor Chain	AM3466	3 船套 3 Vessel Sets	DNV
			锚链 Anchor Chain		3 船套 3 Vessel Sets	ABS
6	万邦船舶重工（舟山）有限公司 IMC Shipyard (Zhoushan) Co., Ltd.	锚链及附件 Anchor Chain And Accessories	锚链 Anchor Chain			
7	江苏海通海洋工程有限公司 Jiangsu Haitong Offshore Engineering Co., Ltd.	锚链及附件 Anchor Chain And Accessories	锚链 Anchor Chain	AM3478	5 船套 5 Vessel Sets	ABS
8	招商局浙江友联修船有限公司 Zhejiang Youlian Dockyard (Zhoushan)	锚链及附件 Anchor Chain And Accessories	锚链 Anchor Chain	AM3497	5 船套 5 Vessel Sets	LR
9	上海南顺船运科技有限公司 Shanghai Dingheng Shipping Technology Co., Ltd.	锚链及附件 Anchor Chain And Accessories	锚链 Anchor Chain	AM2444 AM2442	10/5 船套 10/5 Vessel Sets	CCS/ DNV
10	万隆船舶重工有限公司 Wanlong Shipbuilding Heavy Industry Co., Ltd.	锚链及附件 Anchor Chain And Accessories	锚链 Anchor Chain	AM3497/AM3484/AM3478/AM3473	8 船套 8 Vessel Sets	CCS
11	舟山鑫亚船舶修造有限公司 Zhoushan Xinya Shipbuilding Co., Ltd.	锚链及附件 Anchor Chain And Accessories	锚链 Anchor Chain	按客户需求		
12	舟山龙山船舶修造有限公司 Zhoushan Longshan Shipbuilding Co., Ltd.	锚链及附件 Anchor Chain And Accessories	锚链 Anchor Chain	按客户需求		BV/DNV/ABS/LR/NK/KR
13	舟山市华丰船舶修造有限公司 Zhoushan Huafeng Shipbuilding Co., Ltd.	锚链及附件 Anchor Chain And Accessories	锚链 Anchor Chain	按客户需求		BV/DNV/ABS/LR/NK/KR

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Marine anchor chain

Laiwu Steel Group Zibo Anchor Chain Co.,Ltd.



Product Advantages



- The anchor chain is the chain connecting the anchor and the hull. Our company mainly produces grade 2 and grade 3 Marine anchor chain from $\phi 16\text{mm}$ to $\phi 132\text{mm}$, non-standard engineering chain and related accessories. Our products have obtained the certificates of CCS, NK, DNV, LR, ABS, BV, KR, RINA and RMRS nine international classification society. In recent years, relying on the advantages of the group company, Zibo Anchor Chain has achieved good results in quality control, intelligent construction, technological innovation and other aspects.



Product Specification

Diameter of Chain	Proof Load(KN)		Breaking Load(KN)	
	Grade 2	Grade 3	Grade 2	Grade 3
$\phi 16-132$				
$\phi 16$	107	150	150	216
$\phi 50$	981	1370	1370	1960
$\phi 60$	1380	1940	1940	2770
$\phi 70$	1840	2580	2580	3690
$\phi 81$	2410	3380	3380	4820
$\phi 90$	2920	4090	4090	5840
$\phi 132$	5720	8000	8000	11420



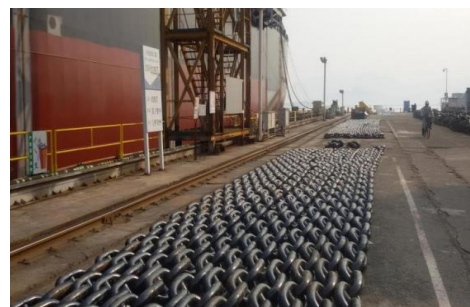
Product Installations

About 40% of the products are exported to Japan, South Korea, Singapore, France, Greece, the Netherlands and other countries and regions. The main foreign shipyards we cooperate with include:

IMABARI SHIPBUILDING CO.,LTD.& TSUNEISHI SHIPBUILDING CO.,LTD. of Japan.

HJ Shipbuilding & Construction CO., Ltd.DAESUN SHIPBUILDING & ENGINEERING CO., LTD. as well as DAEHAN SHIPBUILDING CO., Ltd. of South Korea, have maintained a good cooperative relationship for more than 20 years up to now.

The domestic market is mainly China State Shipbuilding Group、COSCO Shipping Heavy Industry、China Merchants Heavy Industry three shipbuilding groups under the major well-known shipyards.



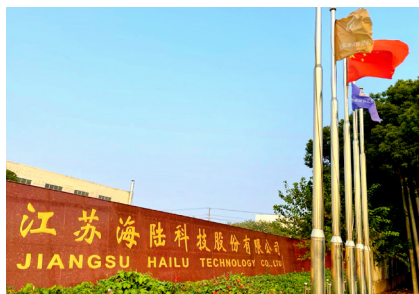


Marine panel

Jiangsu Hailu Technology Incorporated Co., Ltd.



Product Advantages



- Excellent fire safety.
- Efficient thermal insulation performance.
- Outstanding shock reduction performance.
- Moisture resistant and corrosion-resistant, suitable for marine environments.
- The board is lightweight, high-strength, and structurally stable.
- More environmentally friendly.
- Construction is more efficient and convenient.
- Has antibacterial ability.



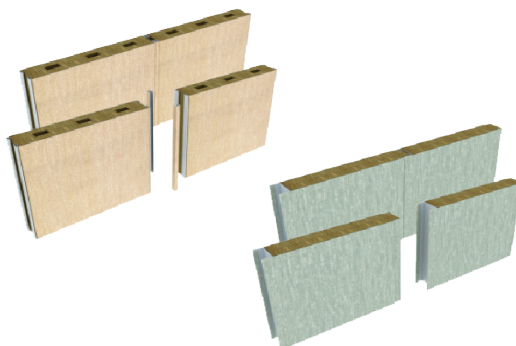
Product Specification

Model	Fire-rating class	Dimension	CCS	DNV	MED	LR	ABS	BV	NK	RS	USCG
JCP-C2A	B15	3090*600	√	√	√	√	√	√	√		√
JCP-C6D	B15	4000*300	√	√	√	√	√	√	√	√	√
JCP-C7	B15	600*600	√	√	√						√
JCP-L2	B0	3000*600	√	√	√	√	√	√	√	√	√
JCP-L3	B15	3000*600	√	√	√	√	√	√	√	√	√
JCP-L4	B15	3000*600	√	√	√	√	√	√	√		√
JCP-B1	B15	3000*600	√	√	√	√	√	√	√	√	√
JCP-B3	B15	3000*600	√	√	√	√	√	√	√	√	√



Product Installations

Jiangsu Hailu Technology Co., Ltd. was founded in 1982 and is a comprehensive enterprise specializing in the production of ship interior materials, land building materials, and general contracting of cruise ship interior engineering. The company produces 1.9 million square meters of composite panels annually. For many years, the company has provided various products and services to domestic and foreign shipbuilding enterprises and interior decoration companies for various types of ships, marine engineering, and living modules, relying on excellent product quality, favorable product prices, and high-quality after-sales service. Our products have been exported to multiple countries in Asia, Europe, America, and other regions, winning widespread praise from domestic and foreign customers.



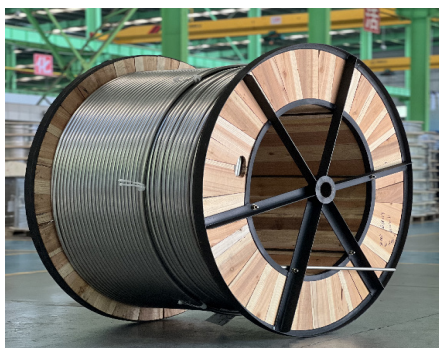


Stainless steel seamless coiled tube

Zejiang Baofeng steel group Co.,Ltd.



Product Advantages



- Stainless steel seamless coiled tubes are spiral or mosquito-repellent incense-shaped tubes made of stainless steel as such through processes such as piercing, rolling, coil drawing and annealing, which have good properties like corrosion resistance, high temperature resistance, high strength and super cleanliness.
- The company has over 20 years of expertise in ultra-long clean seamless coiled tubes. It has pioneered independent research and development of ultra-long inner hole circulation degreasing technology and ultra-long inner hole polishing technology. The use of vacuum furnace annealing makes the product performance more advantageous.
- Baofeng stainless steel coiled tubes can have a single length per coil three times that of products from other manufacturers, making them the longest single seamless coiled tubes in the world.



Product Specification

Baofeng stainless steel seamless coiled tubes
have an outer diameter range of $\Phi 3\text{mm}-30\text{mm}$
a wall thickness of $0.5\text{mm}-4\text{mm}$
a length of over 3000 meters (ultra-long seamless coiled tubes)
and an inner surface roughness of up to $0.12\ \mu\text{m}$
The coiled tubes can be made of Austenitic stainless steel, Duplex stainless steel, and nickel-based alloy steel



Product Installations

China Merchants Jinling Dingheng Shipbuilding (Yangzhou) Co., Ltd.	TP316L (8*1mm*600m)
Shanghai Waigaoqiao Shipbuilding Co., Ltd.	SUS316L (8*1mm*300m-15*1.5mm*80m)
Jiangsu Kexin Marine Equipment Co., Ltd.	TP304 (12*1.5mm-10*1mm*200m)
Taizhou Ocean-Going Marine Machinery Co., Ltd.	TP316 (12.7*1.5mm*1000m)
China Merchants Jinling Shipbuilding (Jiangsu) Co., Ltd.	316L (10*1mm*40m-10*1mm*400m)



Ocean-going Ship Coatings Xiamen Sunrui Ship Coating Co., Ltd.



Product Advantages



- Xiamen Shuangrui Ship Coatings Co., Ltd. has been deeply involved in the ship coating industry for many years and has formed a mature ship coating technology and product matching system. Among them, the ocean going ship coating series anti fouling paint has won wide acclaim for its excellent performance.
- The full range of anti fouling paints from Shuangrui Coatings comply with the requirements of the International Convention for the Control of Harmful Anti fouling Bottom Systems on Ships (IMO), and do not contain toxic anti fouling agents such as cyboride and organotin.



Product Specification

The anti-corrosion coating for the entire ship has been certified by domestic and foreign classification societies such as CCS, DNV, LR, BV, ABS, etc.

TBT-free SPC antifouling is a high solid content, cost-effective self-polishing antifouling coating using mixed hydrolysis technology. It is free of organotin, DDT and Cybutryne. Suitable for all kinds of ship maintenance and new construction operations. The longest anti-fouling period can reach 3 to 5 years.

TBT-free antifouling coating is a single component antifouling coating based on silicone methacrylate and hydrolyzed linear self-polishing technology. It is free of organotin, DDT and Cybutryne. With a smooth polished finish and low friction coefficient of friction reduction, minimize fluid resistance and speed loss. The fuel saving rate can reach 4~6%. Suitable for all kinds of ocean-going ships, dry-docking interval of which are 5 years or more. The longest idle time can reach 28 days.

Series of special function anti fouling paint: using composite fungicides to effectively inhibit the attachment of marine organisms. It can dynamically adjust the release rate of anti fouling agents based on water temperature, salinity, and sailing speed, extending the effective period (5-7 years). Ultra low friction resistance, nano modified surface technology reduces navigation resistance, and reduces fuel consumption by up to 15%. Extreme environment adaptation, suitable for polar low temperature, deep-sea high pressure or equatorial high temperature sea areas, with adhesion up to ISO 4624 standard. Green and environmentally friendly, Wuxi has no bioaccumulation of toxins, has passed IMO G9 and EU BPR certification, and supports sustainable development.



Product Installations

In recent years, the company's ocean going ship coatings have developed rapidly, with cooperative clients including China Merchants Group Co., Ltd., Shandong Shipping Tanker Transport Company, China Oilfield Services Co., Ltd., Shanghai Weima International Ship Management Co., Ltd., and American Fumao Group PEGASUS MARINE SERVICES LLC. ASCA Maritime FZE, Aquarro Logistics and Trading L.L.C-FZ. Technical Ship Management, Charisma Consultancy LLC-FZ, In 2022, it was awarded the title of Excellent Coating Enterprise in Fujian Province and the 2022-2024 Xiamen Special and New Small and Medium sized Enterprise, High tech Enterprise.



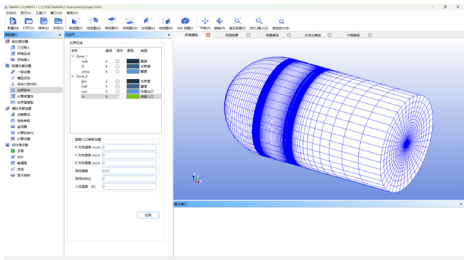


Ship Fluid CFD Software MarineFlow

China Ship Scientific Research Center



Product Advantages



- **Full autonomy and control over the entire CFD simulation process:** Achieves complete autonomy in mesh generation, numerical computation, and result post-processing for CFD simulations.
- **Rich pre/post-processing software interfaces:** The software provides import/export interfaces for commonly used/neutral file formats for model files, mesh files, and result post-processing files.
- **Rich turbulence and free surface models:** Supports k-ε series, k-ω series, LES series, DES series, etc. turbulence models, as well as HRIC series, CICSAM series, etc. free surface models.
- **Excellent grid compatibility:** Supports polyhedral grids, including structured grids, unstructured grids, Cartesian grids, hybrid grids, etc.
- **Well-developed numerical simulation capabilities:** Features simulation capabilities for single-phase turbulence, two-phase turbulence, inertial/non-inertial frames, multiple reference frames, six-degree-of-freedom motion, sliding mesh, and overset mesh.
- **Extensive systematic validation:** Conducted systematic validation through benchmark CFD uncertainty analysis, international blind tests comparison with ITTC, and extensive application validation using rich experimental data from research.



Product Specification

Equipped with mesh generation,CFD computation and post-processing capabilities	Supports numerical simulations with dynamic mesh, sliding mesh, and overset mesh
Capable of performing three-dimensional steady/unsteady single-phase turbulent and two-phase turbulent simulations	Supports MPI for large-scale parallel computing
Supports inertial, non-inertial, and multi-reference frame numerical simulations	Provides interfaces with major commercial CFD and pre/post-processing software



Product Installations

The fluid analysis software is a fluid simulation software developed by the China Ship Scientific Research Center in collaboration with Wuxi Orient Software Technology. It possesses completely independent intellectual property rights and has achieved engineering application, realizing full-process autonomy and control in CFD simulation, including mesh generation, numerical calculation, and result post-processing.

During its development, the software adhered to the principle of "promoting development through applications." Visiting approximately 20 organizations and providing trial versions to about 40 units.Current clients include major shipbuilding

and hydropower industry players such as the 708 Research Institute, Hudong-Zhonghua Shipbuilding, Shanghai Merchant Ship Design & Research Institute, Chengxi Shipyard, and China Yangtze Power. The product has been honored with award of the Second Prize in the "Jiangsu Shipbuilding Industry Software Competition".



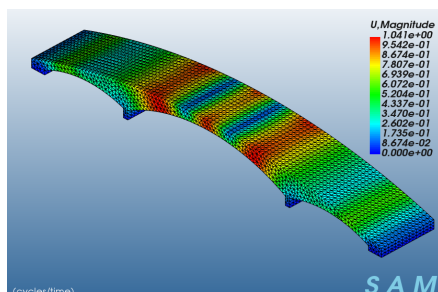


Ship Structure CAE Software SAM

China Ship Scientific Research Center



Product Advantages



- Autonomy**
 Fully Autonomous and Controllable
 Solve "Strangling" Issues
- High Precision**
 Calibrated with Extensive
 Experimental Data
 Verified by Synchronous Physical
 Experiments
- Scalability**
 Object-oriented Framework Design
 up-down stream Software Interface
- Reliability**
 Maintained by a Professional Software
 Team
 GJB5000A Development Process



Product Specification

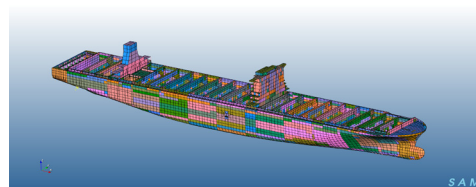
Industry General Functions		Ship-specific functions			
Pre-post Processing	FEA	Environmental Load	Vibration and Noise	Structural Safety	Blast Impact
Unified user interface	Static analysis	Complex environment forecast	Structural dynamic analysis	Ultimate strength analysis	Prediction of underwater explosion Load
Parametric geometry modeling	Steady-state analysis	Wave load prediction	Efficiency analysis of vibration isolation system	Fatigue strength analysis	Impact environment prediction
Neutral CAD model import	Acoustic analysis	Dynamic analysis of mooring system	Cabin noise analysis	Buckling analysis	Equipment impact resistance assessment
3d interaction of the whole process	Multi-physics coupling	Slamming wave analysis	Underwater noise analysis	Risk analysis	Damage effect analysis of near-field explosion
Abaqus/Ansys/Nastran API	Transient analysis	Ice load analysis	Acoustic target strength analysis	Optimization design	Grounding and collision analysis
Mesh division and mesh refinement	Modal analysis				
Smoothly display millions of Meshes	Nonlinear analysis				
Support user secondary development	Other analysis				



Product Installations

SAM (Structural Analysis for Marine applications), a self-developed general-purpose CAE software, is jointly developed by the China Ship Scientific Research Center (CSSRC) and Wuxi Orient Software Technology in collaboration with leading domestic partners. With core capabilities in structural finite element analysis (FEA), it benchmarks against commercial tools such as Nastran, Ansys, and Abaqus, supporting static, modal, steady-state, transient, nonlinear, and multi-physics analyses. Its solution accuracy exhibits errors below 0.1% compared to commercial software, with computational efficiency on par with industry leaders.

SAM is currently applied across various industries including aerospace, aviation, shipbuilding, automotive, machinery, and electronics.





中船奥蓝托无锡软件技术有限公司

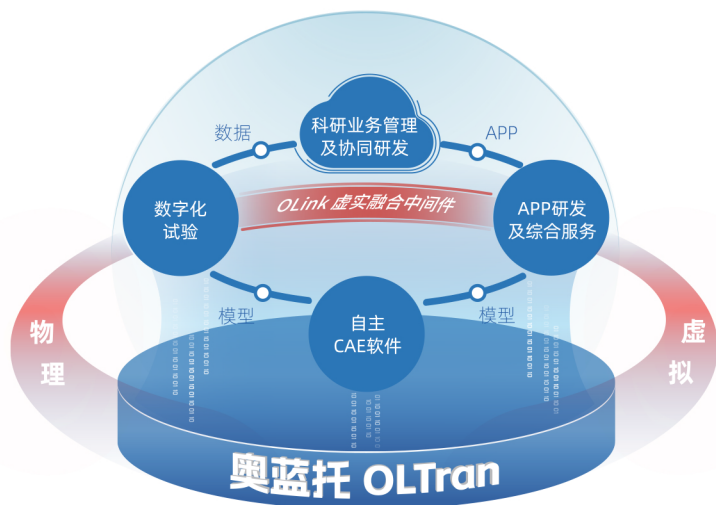
WUXI ORIENT SOFTWARE TECHNOLOGY CO.,LTD.



Wuxi Orient Software Technology Co., Ltd. (Wuxi Orient) is a holding subsidiary founded by China Ship Scientific Research Center in order to adapt to the development of industrialization process under the new circumstances. The Company is headquartered in Wuxi, and set up seven branch offices in Beijing, Shanghai, Xi'an, Chengdu, Mianyang, Guiyang, and Wuhan.

Self-Owned Brand OLTran

- As the open common technology base platform, OLTran supports our users and provides them with a comprehensive solutions service of **CAE software, design simulation, cooperative research development, testing data management and informatization administration.**



Forging the Soul of Industry
Charting a Self-Reliant Future

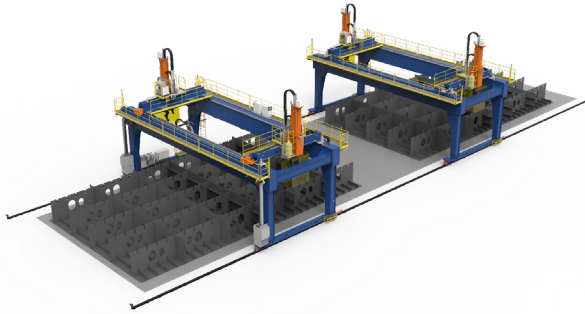
Address: No. 60, Qing Shu Road, Economic Development Zone,
Wuxi City, Jiangsu Province
TEL: 0510-85555051 URL: <http://www.oltsoft.com/>

KAIYUAN Hull Section Block Assembly Smart Robotic Welding Line

Welding for More Tangshan Kaiyuan Autowelding System Co., Ltd.



Product Advantages



- Automatic ship design data reading, weld generation & welding parameter setup. No on-site teaching required. Automatically generates robot programs.
- Features simulation modeling and interference checking with 100% accuracy.
- Capable of performing 3.5m vertical welding for flat block sub-assemblies.



Product Specification



Product Installations

Tangshan Kaiyuan Autowelding System Co.,Ltd.(TKAS)was founded in 1993,and it's the earliest manu-facturer of automatic welding equipment in China.As a member of Tangshan Kaiyuan Group,the compa-ny focuses on developing automatic welding equipment,provides our customers with complete solutionson welding automation.

After over three decades of development,KAIYUAN has become a leading brand in the industry of auto-matic welding equipment in China.With the synergy advantage of Kaiyuan Group and decades of experi-ence in designing and manufacturing,TKAS keeps providing our customers worldwide with high qualityproducts and service.

Thanks to the know-how on welding technology,expertise in mechanics,electronics and software,ourproducts are widely used in automotive,shipbuilding,construction machinery,construction steel struc-ture,steel bridge,coal mining machinery,pressure vessel,power equipment,offshore,harbor machinery,railway vehicles and home appliance etc.

We orient ourselves to meet the need of our customers,providing products and services with high reliabil-ity and creating more values for our customers worldwide.We conduct our business in accordance withthe philosophy that the development of the company depends on how much it meets social demands.We shall not stop striving to promote the development of welding automation industry of China.

唐山开元助力中国数智化船舶建造新发展

Tangshan Kaiyuan Empowers New Development of Digital and Intelligent Shipbuilding in China

KAIYUAN
Welding for More

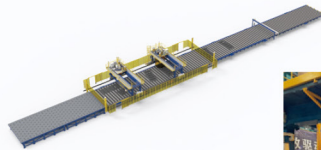
Smart Welding Line for Pre-assembly



- Conveyor Line Mode and Cantilever Walking Mode available.
- Laser detection and 3D scanning automatically locate weld seams.
- Back heating is optional.
- Cantilever mode has higher output per unit area.



Smart Welding Line for Sub-assembly



- Automatic ship design data reading, weld generation & welding parameter setup. No on-site teaching required. Automatically generates robot programs.
- Equipped with 3D vision weld seam recognition capability. Even without design data for the workpiece, the system can automatically acquire weld seam information and generate welding programs.
- Based on the weld position identified by the 3D vision system, the flame torch automatically tracks the seam and precisely performs back heating at the weld location.
- Features simulation modeling and interference checking with 100% accuracy.



Smart Welding Line for Block-assembly



- Automatic ship design data reading, weld generation & welding parameter setup. No on-site teaching required.
- Automatically generates robot programs. Features simulation modeling and interference checking with 100% accuracy.



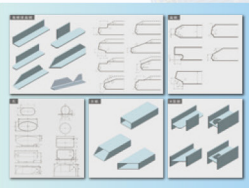
Robotic Profile Cutting Line



- Data-Driven Operation: The system directly imports data from ship design software to auto-generate cutting parameters, enabling teach-free programming.

- Robotic marking is available.
- Raw material primer grinding & auto-sorting system is available.
- Compatible with Bar stock processing

Applicable Profiles



Block-assembly Smart Welding Line



- Automatic ship design data reading, weld generation & welding parameter setup. No on-site teaching required. Automatically generates robot programs.
- Features simulation modeling and interference checking with 100% accuracy.
- Capable of performing 3.5m vertical welding for flat block sub-assemblies.



ER-100 Rail-guided Smart Welding System



- Automatically generates optimized multi-layer, multi-pass welding procedures.
- Detects and memorizes groove profiles for precise layer-by-layer replication.
- Lightweight construction enables easy transport and rapid deployment.
- All-Position welding capability.

Applications in Shipbuilding



Mobile Robotic Welding System



- Generates robot programs by inputting parameters without on-site teaching.
- Unmanned welding Process.
- Rapid deployment capability with infinitely extendable standard rails.



Pipe Flange Intelligent Assembly & Welding Production Line



- Ship pipe design data drives production equipment to automatically generate cutting and welding programs.
- Automates the entire process from material feeding/measuring, nesting, marking→cutting/beveling→assembly→welding→to sorting and palletizing.
- Open data interfaces integrate with customer ERP/MES systems, enabling real-time production monitoring from office environments.



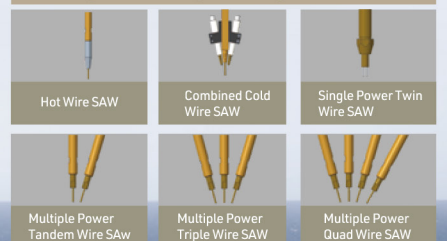
Digital Submerged Arc Welding Machine



- Precise waveform control.
- Accurate phase-shift control.
- Stable multi-power parallel operation.
- High expandability.
- Optional IoT module for Panasonic iWeldCloud.



High-Efficiency Welding Solutions



Tangshan Kaiyuan Autowelding System Co., Ltd.

Tel: +86-315-3859606



Add: 168 Gaoxin W. Rd., Hi-tech Industrial Development Zone, Tangshan, Hebei

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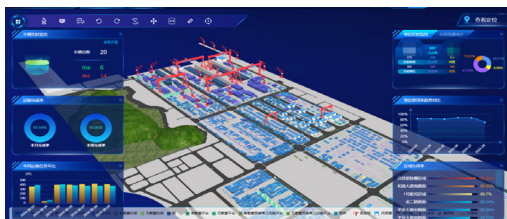


Ship production resource control platform

GuangZhou Hongfan Technology Co., Ltd.



Product Advantages



- The Ship production resource control platform based on the new generation of information technology realizes the deep integration of digital twin and industrial Internet technology, solving the problems of real-time status monitoring of key production resources and tracking of production logistics.
- By applying both Beidou RTK and UWB high-precision positioning technologies, the technical problems of indoor and outdoor positioning for the intermediate products of ships are solved.
- Innovatively proposed a new method for integrating GIS (Geographic Information System) with digital twin technology, effectively solving the problem of information isolation in the ship production process.
- An algorithm-based AI artificial intelligence model for segmental storage planning was constructed, which solved the problems of unreasonable utilization of storage resources and disorderly segmental stacking.



Product Specification

Specification	Parameter
Resource positioning accuracy	< 30CM
Precision of rotation direction	< 5°
Fuel consumption accuracy error	< 0.5%
Load accuracy error	< 0.03% FS
Data collection frequency	> 1Hz
Interface response time	< 5 Second
Loading time of historical data	< 15 Second



Product Installations

In the application of the system at Guangchang International Shipbuilding, the important production resource management cockpit of the shipbuilding process has demonstrated remarkable effectiveness. It not only enhanced production efficiency, but also reduced production costs and improved product quality. The successful application of this platform has played a leading and exemplary role in the transformation and upgrading of the management model for important production resources in the shipbuilding industry. It provides a reference intelligent management model for shipbuilding enterprises and promotes the entire industry towards the direction of intelligence and digitalization.

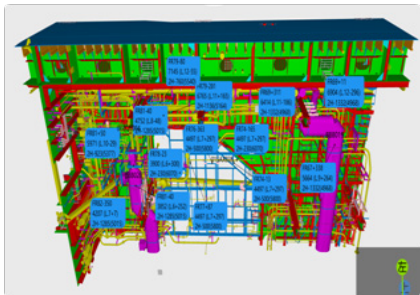


红帆
HONGFAN

Paperless Construction Platform for Ships
GuangZhou Hongfan Technology Co., Ltd.



Product Advantages



- The design models from multiple ship design platforms are uniformly stored after lightweight processing, enabling efficient display of lightweight design models on a unified platform.
- By abandoning traditional 2D drawing construction methods and shifting to mobile 3D model viewing for construction guidance, the workload of 2D drawing design is reduced, the skill requirements for construction personnel are lowered, and construction quality and efficiency are improved.
- To meet the construction information needs of various shipbuilding processes, application scenarios for 3D model information display are developed, allowing quick access to 3D production information tailored to each production process.



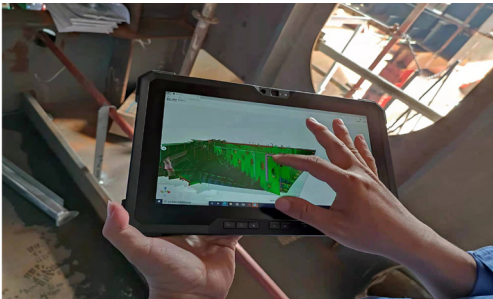
Product Specification

Specification	Parameter
Thelightweight processing method	The lightweight processing method achieves a compression ratio of over 1:20 while preserving model quality
Data Navigation	Restructures the assembly tree according to production business needs
Information Integrity	Enables simultaneous viewing of 3D models and process information
Data Export & Management	Automatically exports bound BOM data with version control and historical comparison support.
Data Viewing	Implements progressive loading for large ship scenes with automatic 3D annotation
System Support	Supports Windows, Android, and Harmony OS on tablets and computers
Response Speed	Provides mobile annotation, measurement and comparison functions for field operations, with query response time under 60 seconds



Product Installations

The project outcomes have been applied to the shipbuilding management of Guangzhou Shipyard International Co., Ltd. They have achieved a 95% paperless rate throughout the entire shipbuilding process, leading to a 20% increase in production efficiency and a 30% increase in design efficiency. Additionally, they result in annual savings of 2 million RMB on drawing materials and consumables. The core technologies are independently controllable. These achievements deliver significant economic and social benefits and exhibit broad potential for application in other scenarios.





DongXin Ship Building Digital Management System DMS 5.0

Shanghai DongXin Software Engineering Co.,Ltd.



Product Advantages



- DMS5.0, as the domestically leading digital shipbuilding solution, is tailored for shipbuilding enterprises. It comprehensively covers key business areas such as production, supply chain, quality, cost, finance, and legal affairs, realizes "early testing, real-time analysis, anytime clearing and dynamic control" of production management, operation management, and data processing management, assisting enterprises connect the business data chain, release the data value chain, and improve refined operation capabilities.



Product Specification

Specification	Parameter
Shipbuilding Engineering Plan Management	Introduce advanced thoughts and methods of lean management, create an original "combination of push and pull, integrated planning" through schedule planning and resource planning, and ensure manufacture rhythm, balance and order through visual tools.
Precise Task Allocation Management	Establish a shipbuilding man-hour management system through the combination of production planning and task assignment. Combined with design quantity information, using the task package coding rules as carrier, it realizes scientific measurement of quota man-hours, effective feedback of actual man-hours, and effective settlement of daily assigned tasks.
Supply Chain Management	Guided by the supply chain management system, it streamline the business processes of material supply, material management and material distribution, and unblock data links, build an internally connected and externally unobstructed environment. This enables integrated, process-oriented and transparent management throughout the entire supply chain, providing auxiliary decision-making support for supply chain management.
Legal Affairs Management	Through process-driven mechanisms, it achieves full lifecycle management of contract drafting, approval, stamping, execution, performance, amendment and archiving. Through online price review, standardized templates, online editing and categorized control, it enables online workflow for procurement processes, ensuring full demand with regulatory requirements throughout the procurement cycle.
Quality Management	A quality control platform covering all shipbuilding operations and processes. Quality control runs through the entire life cycle of ship manufacturing, starting from the initial design, quality control of purchased materials, inspections during production, to after-sales service guarantees after final product delivery.
Cost Management	Applying the full lifecycle cost theory, and through unified cost codes, it builds a dynamic cost management and control system covering "cost quotation → target cost formulation → procurement cost control → manufacturing cost control → actual cost accounting → cost analysis, feedback and control → cost information database".



Product Installations

Shanghai Dongxin Software Engineering Co., Ltd. is a wholly-owned subsidiary of Hudong-Zhonghua Shipbuilding (Group) Co., Ltd. With 30 years of in-depth digital R&D at the engineering frontline, the company has developed a product support system that connects business information, models and data across the entire lifecycle of ships, including ship full 3D design system, digital process design system, ship product data management system and ship digital management software. Covering the entire shipbuilding lifecycle spanning "order, R&D, design, procurement, manufacture, inspection, delivery and maintenance", Dongxin stands as the only domestic marine software engineering enterprise that simultaneously offers "ship design tool software and shipyard digital management systems" with proven commercial application in actual shipbuilding projects. Its products serve nearly 300 clients nationwide, including shipyards, research institutes and universities. The company have supported Hudong-Zhonghua in delivering 500 completed ships.





Ship-Repairing Solution Software

Jiangsu Modern Shipbuilding Technology Co.,Ltd.



Product Advantages



- Real-time Multi-user Collaboration: to build flexible management platform for cooperative project order, realizing effective records, dynamic update and sharing.
- Multi-order in One, Clear Account after Shipbuilding: itemized signing, account managing, E-price book making, settlement accelerating, realizing clear account after shipbuilding.
- Covering and Improving Business: based on project order data, covering management, quality, security, materials and logistics. e the features and advantages of the product.
- Digital Empowerment, Cost Decreasing and Benefit Increasing: based on business data, finding digital assets, improving efficiency index and allocating resources properly.



Product Specification

Business Matching	Concurrent Processing	Expandability	Security	Reliability
Project order collaboration platform realizes one order for both making and accounting. By E-price book, accounting efficiency has increased with 3 times, which shorten accounting period, meeting the requirements of more than 400 repairing shipyards.	Support 10000 Concurrent online users and 500 concurrent requirements, ensuring system fluency during rush hour.	Based on low-code platform, the system supports secondary development and module-class and functional expanding, meeting the requirements of information technology application innovation.	Ensuring application security through authentication, access control, core data encryption and log audit.	With fault-tolerant mechanism, Backup and restore policies, adopting double hot standby and remote disaster recovery for ensuring reliability.



Product Installations

With rapid development, the product has been applied and implemented in several large-scaled ship-repairing enterprises, including Zhoushan Xinya Shipyard, Yiulian Shipyard (Shekou), Nanyang Star Ship Industry, Zhoushan ZHongtian Heavy Industry, Hongkong Yiulian Shipyard, IMC Shipyard (Zhoushan) and so on. The cooperation in Phase II and III of those enterprises has been underway. The product has been selected as one of the Excellent Industry Software of Jiangsu Province in 2021.





PIPE Manufacturing Execution System Software

Jiangsu Modern Shipbuilding Technology Co.,Ltd.



Product Advantages



- With upgrading and rebuilding on intellectual production line of pipe manufacturing workshop, the system supports both the traditional production mode of assembly-welding for all and bending after welding, and the production line mode of batching-welding and welding after bending.
- Based on design model data, adopting processing data from production line, disassembling pipe manufacturing and groups, generating automatically work orders, checking materials.
- Support station computers, mobile equipment and production line feedback, ensuring the timeliness and accuracy of production situation.



Product Specification

Business Matching	Concurrent Processing	Expandability	Security	Reliability
The system has various functions like design data extraction, auto-calculation of process data, disassembling of work order, production scheduling of workshop, materials inspection and so on, meeting the requirements of workshop manufacturing more than 80000 pipes.	Support 10000 Concurrent online users and 500 concurrent requirements, ensuring system fluency during rush hour.	Based on low-code platform, the system supports secondary development and module-class and functional expanding, meeting the requirements of information technology application innovation.	Ensuring application security through authentication, access control, core data encryption and log audit.	With fault-tolerant mechanism, Backup and restore policies, adopting double hot standby and remote disaster recovery for ensuring reliability.



Product Installations

With rapid development, the product has been applied and implemented in several large-scaled shipbuilding enterprises, including New Time shipbuilding, Yantai CIMC Raffles, New Dayang Shipbuilding, COSCO Shipping Heavy Industry and so on. The product has been selected as First Prize in Ship Industry Software Competition Industry Software of Jiangsu Province in 2023.





Contemporary Shipbuilding Solution Software

Jiangsu Modern Shipbuilding Technology Co.,Ltd.



Product Advantages



- It combines the concepts of project management and enterprise management, integrating the entire process from planning, design, material management, production, quality control to cost optimization deeply. Through efficient collaboration and precise control, it enhances the overall operational efficiency of the enterprise significantly.
- Relying on years of experience in enterprise application implementation, it is equipped with standardized basic data and management processes to ensure data consistency and process standardization. It also has flexible configuration capabilities, can be quickly adjusted as needed, and supports expansion to meet the demands of future business iterations and technological upgrades.



Product Specification

Business Matching	Concurrent Processing	Expandability	Security	Reliability
The product is adapted to the characteristics of the shipbuilding and offshore engineering industries, meeting the integrated management needs of enterprises and providing applicable management support.	The system supports tens of thousands of users online simultaneously. Its core business functions can handle over 50 concurrent requests, coping with peak usage periods effectively, ensuring smooth user operations without lag and guaranteeing the stable and efficient operation of the integrated business process.	Architecturally, it supports expansion to meet the growth demands of user numbers and data volumes that enterprises may encounter during their development process. It has the ability for secondary development and expansion and can achieve module-level and functional-level expansion development.	Ensure application security through identity verification, access permission control, core data encryption, log auditing, etc.	Support high availability of applications and database deployment, and features fault-tolerant mechanisms, backup and recovery strategies.



Product Installations

In recent years, the product has achieved rapid development and has been applied in many large-scale offshore engineering and shipbuilding enterprises. Our cooperative customers include various shipbuilding bases of CMIH, Yangzijiang shipbuilding Group, New Time shipbuilding, Yantai CIMC Raffles, New Dayang Shipbuilding, COSCO Shipping Heavy Industry, Zhoushan Changhong International, Jiangsu Hantong Ship Heavy Industry, etc. The product has been selected as one of the Excellent Industry Software of Jiangsu Province in 2023.

Technology Advantages

- Low-code Development Platform
- Data Modeling
- Process Engine
- Smartphone Support
- Intellectual Tables
- Timed Task

Business Advantages

- ✓ Scenarized Plan on Business
- ✓ On-site Implementation
- ✓ Agile Response
- ✓ Understand Client
- ✓ Understand Industry
- ✓ Application Configuration

Technology + Knowledge + Experience

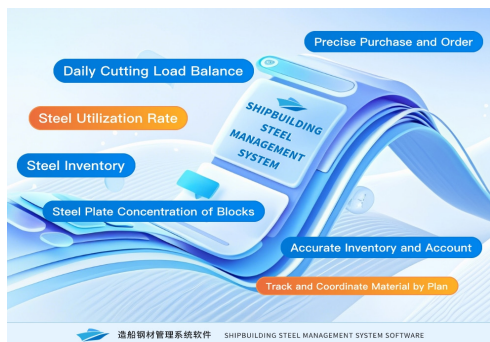


Shipbuilding Steel Management Solution Software

Jiangsu Modern Shipbuilding Technology Co.,Ltd.



Product Advantages



- Based on the Just-In-Time (JIT) concept, a full life cycle management system for steel has been constructed. Through digital means, end-to-end collaboration among Design BOM, procurement planning and yard operations will be achieved, solving the problem of cross-departmental information silos and improving overall operational efficiency.
- Innovate the lock-in mechanism for inventory utilization, the planning for warehousing and the dynamic steel plate replacement mechanism to completely solve the problems such as disorderly steel plates, difficulty in finding materials, malicious occupation of inventory, unclear accounts and physical inventory. While enhancing the operational efficiency of the yard, it ensures a high steel inventory rate, providing stable support for the shipyard's production.



Product Specification

Business Matching	Concurrent Processing	Expandability	Security	Reliability
Adapted to the characteristics of the shipbuilding and heavy steel structure industries, it meets the full-process steel management needs of enterprises.	It supports tens of thousands of users to be online simultaneously, and the core business functions support over 50 concurrent requests, ensuring that users can use the system smoothly during peak usage periods.	Architecturally, it supports expansion to meet the growth demands of user numbers and data volumes that enterprises may encounter during their development process. It has the ability for secondary development and expansion and can achieve module-level and functional-level expansion development.	Ensure application security through identity verification, access permission control, core data encryption, log auditing, etc.	Support high availability of applications and database deployment, and features fault-tolerant mechanisms, backup and recovery strategies.



Product Installations

In recent years, the product has achieved rapid development and has been applied in many large-scale offshore engineering and shipbuilding enterprises. Our cooperative customers include various shipbuilding bases of CMIH, New Time shipbuilding, Yantai CIMC Raffles, New Dayang Shipbuilding, COSCO Shipping Heavy Industry, Zhoushan Changhong International, Jiangsu Hantong Ship Heavy Industry, Taizhou Zhonghang Shipbuilding, etc. The product has been selected as one of the Excellent Industry Software of Jiangsu Province in 2024.





Intelligent Storage Yard Management System

Wuhan HG Cyber Data Systems Co., Ltd.



Product Advantages



- This system applies information technology and IoT for unified storage yard management, enabling automation of warehousing, inspection, outbound logistics, inventory, stack rotation, and relocation.
- Reduced Plate Flipping: Optimized warehouse allocation minimizes flipping and reduces retrieval time
- Visualization: Real-time monitoring of storage yard inventory using 2D dashboards or 3D digital twins
- High Intelligence: Provides preprocessing for equipment control and execution, reducing complexity in business decomposition and equipment coordination



Product Specification

Business Adaptability	Scalability	Security	Reliability
Serves as the control center for steel plate storage, coordinating the entire storage process. Functions include modeling, data collection, inventory management, and reporting. Deep integration with MES and crane control systems enables seamless job planning, stack synchronization, and completion reporting.	Based on a proprietary low-code platform with Spring Boot architecture, supports secondary development and expansion, offering high flexibility.	Features strict user authentication, button-level permission control, and real-time operation logging to ensure system security and stability.	Supports dual-machine hot standby deployment, regular data backups, and rollback in case of anomalies, ensuring robust reliability.



Proven Applications

This system has been successfully applied in large-scale steel-consuming industries such as shipbuilding and steel structures.

Case Example-Xinneng Shipbuilding Intelligent Storage Yard Management:As the central brain of the storage yard and sorting center, the system achieves seamless integration of workflows, information, and data between storage yard and sorting operations. It is compatible with both plate and profile inventory management.



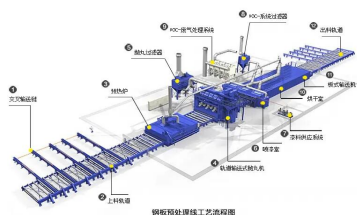


Intelligent Steel Plate Pre treatment Line

Shandong TAA Machinery Technology Co., Ltd.



Product Advantages



● Intelligent: Worry-free, Labor-saving, Cost-saving

Fully integrated with intelligent cranes, full-format printing systems, and shipyard MES systems, increasing the efficiency of pretreatment and cutting processes by more than 60%;The shot blasting and painting system can intelligently identify the status of steel plates and automatically optimize parameters, effectively reducing the unit consumption of abrasives and paint by more than 30%;The entire line is equipped with an intelligent online quality inspection and equipment safety prediction system, significantly reducing maintenance frequency and saving labor costs by more than 60%.

● Green: High Efficiency, Energy Saving, Environmental Protection

The equipment has good protection, no leakage, no smoke and dust leakage, and the working environment is cleaner;Adopting RTO waste heat drying system, efficiently recycling energy, significantly reducing overall energy consumption;Faster processing speed than traditional equipment, with a normal operation speed of 6m/min, meeting the PSPC standard, significantly saving labor and energy consumption, and reducing carbon emissions.

● Strong Stability: Low Failure Rate, Simple Maintenance

Ensure the equipment runs stably for 24 hours to guarantee production;The abnormal shutdown rate is reduced by more than 90%, and production efficiency is greatly improved;The service life of vulnerable parts is significantly increased, 3-5 times that of ordinary vulnerable parts, reducing replacement frequency and costs;Equipped with multiple intelligent protection measures (emergency buttons, door-machine interlocking, danger warning, automatic shutdown, dust explosion warning, etc.) to fully protect personnel and equipment safety.

● Pretreatment Quality Aids Sand Sweeping Process:

The shot blasting quality fully meets the PSPC requirements;Targeted solution to the problem that the shot blasting quality of the bottom and edges of shipyard steel plates is not up to standard;Lay the foundation for the implementation of the sand sweeping process in the subsequent coating process, significantly reducing coating costs.



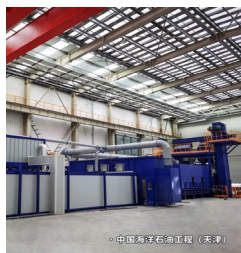
Product Specification

Specification	Technical Parameter
Customizable	Pretreatment lines of various specifications from 1.5m to 5.2m in width can be customized non-standard, with a processing speed of 6m/min



Product Installations

The intelligent pretreatment line has supported the steel processing projects of shipbuilding and marine engineering enterprises such as CSSC Huangpu Wenchong, COSCO Shipping Heavy Industry, China Merchants Industry Group, China National Offshore Oil Corporation, Hengli Heavy Industry Group, and Shandong Energy Group, achieving remarkable results in promoting intelligence, greenization, cost reduction and efficiency improvement.





Intelligent T-bar production line

Wuxi Hualian Science & Technology Group Co., Ltd.



Product Advantages



- The intelligent T-bar production line consists of following stations: automatic flange&web loading devices, automatic flange grinding&rounding machine, web automatic grinding machine, T-bar pre-assembly device, T-bar automatic assembly machine, T-bar multi-electrode automatic welding machine, T-bar straightening machine with crosswise moving&buffer device, roller conveyor, tilting devices etc. With the exception of flange/web loading and T-bar unloading after straightening (which require crane lifting), all workpiece transfers between stations are accomplished through automated roller conveyor systems or crosswise moving mechanisms. This enables fully automated material flow throughout the entire production line. This is a fully automated T-bar production line designed to meet current demands for cost reduction and efficiency improving, while simultaneously matches the future needs of intelligent shipyard construction.



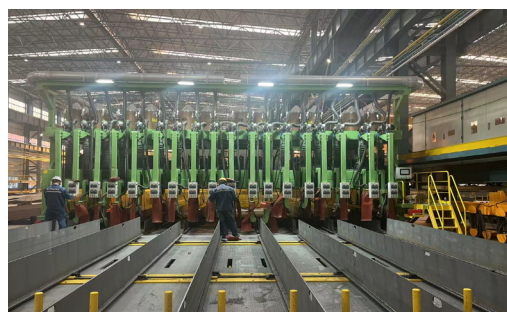
Product Specification

Applicable T bar size		
Flange thickness		10-40mm
Web thickness		8-25mm
Flange width		80-300mm
Web height		200-1000mm
T bar length		3000-22500mm



Product Installations

Intelligent T-Bar Production Line customer List	
HENGLI GROUP	CSSC CHENGXI SHIPYARD CO., LTD
CHINA MERCHANTS GROUP(JIANGSU)	JIANGSU HAITONG OFFSHORE ENGINEERING CO.,LTD
ZHOUSHAN CHANGHONG INTERNATIONAL INDUSTRY PARK	SHANGHAI WAIGAOQIAO SHIPBUILDING CO.,LTD
NANTONG XIANGYU SHIPBUILDING & OFFSHORE ENGINEERING CO., LTD	COSCO SHIPPING HEAVY (YANGZHOU) VO.,LTD
CSSC JIANGNAN SHIPYARD	CSSC CHINA STATE SHIPBUILDING COTPOTATION QINGDAO BEIHAI SHIPBUILDING CO., LED
NEW TIMES SHIPBUILDING CO.,LTD	QINGDAO WUCHANG SHIPBUILDING INDUSTRY GROUP CO.,LTD



Add: Chengnan Road NO.238, Xinwu District, Wuxi City, Jiangsu Province
E-mail: sales@wxhlhg.com

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Intelligent Panel Line

Wuxi Hualian Science & Technology Group Co., Ltd.



Product Advantages



- This panel line offers versatile panel fabrication methods tailored to client requirements, such as laser-arc hybrid welding for single-side welding with reverse-side forming, FCB single-side welding with reverse-side forming, stationary SAW gantry with pressing mechanism + 180 degree automatic flipping of plates+ plate seam leveling machine, mobile twin-wire SAW gantry + 180 degree automatic flipping of plates + reverse side plasma gouging machine, etc. It is equipped with large-span automatic marking machine, large-span contour cutting machine, longitudinal stiffener mounting machine, and multi-electrode longitudinal stiffener welding machine, achieving efficient and automated production of panel blocks. In particular, the mounting of longitudinal stiffeners adopts the high-efficiency automated stiffener mounting machine. This effectively improves mounting precision and provides a reliable guarantee for the subsequent mounting of crosswise stiffeners using pulling or pressing methods. Gantry with manual welding systems or collaborative robot welding systems are arranged in the semi-block assembly manufacturing area, enabling high-efficiency welding of stiffeners. It is also provided with block transportation trains and block lifting devices, facilitating rapid and safe movement between different manufacturing stations and ensuring efficient and safe unloading of block.



Product Specification

Applicable platesize	
Panel thickness	6-40mm
Web thickness	8-25mm
Block width	6000-20000mm
Block length	6000-25000mm
Max. block weight	400 tons



Product Installations

Intelligent Panel LineCustomer List		
DALIAN SHIPBUILDING INDUSTRY CO., LTD.	NEW TIMES SHIPBUILDING CO.,LTD	MALAYSIA MARINE AND HEAVY ENGINEERING SDN BERHAD
SHANGHAI WAIGAOQIAO SHIPBUILDING CO.,LTD	CSSCJIANGNAN SHIPYARD	NANTONG COSCO HKI SHIP ENGINEERING CO., LTD
NANTONG XIANGYU SHIPBUILDING & OFFSHORE ENGINEERING CO., LTD	ZHOUSHAN CHANGHONG INTERNATIONAL INDUSTRY PARK	WISON ENGINEERING LTD.
CHINA MERCHANTS GROUP(SHENZHEN)	CHINA MERCHANTS GROUP	HAIYANG CIMC RAFFLES OFFSHORE LTD.
CHINA MERCHANTS GROUP(JINLING)	CHINA MERCHANTS GROUP(JIANGSU)	YANGZI-MITSUISHIPBUILDING CO., LTD.
CHINA MERCHANTS GROUP(YANGZHOU)	LONGKOU CIMC RAFFLES OFFSHORE LTD.	JIAN SUN NEW HANTONG SHIP HEAVEY INDUSTRY CO., LTD



Intelligent T-bar production line

Wuxi Hualian Science & Technology Group Co., Ltd.



Product Advantages



- This automatic line integrates plate automatic loading, automatic grinding of plate cutting dross, automatic plate edge rounding, and automatic unloading with corsswise moving&buffer device. The entire process—automatic plate loading→automatic positioning of upper and lower grinding heads→automatic positioning of upper and lower roundingrollers→automatic start of grinding&rounding→automatic completion of grinding&rounding → automatic unloading of plates—operates under fully automated single-button control. No manual intervention is required during operation.



Product Specification

Applicable platesize	
Plate thickness	10-40mm
Plate width	80-300mm
Plate length	3000-22500mm



Product Installations

Inetragtedrounding&Grinding Linecustomer List	
HENGLI GROUP	ZHOUSHAN CHANGHONG INTERNATIONAL INDUSTRY PARK
JIANGSU HAITONG OFFSHORE ENGINEERING CO.,LTD	NEW TIMES SHIPBUILDING CO.,LTD
CSSC JIANGNAN SHIPYARD	





Bulb Flat Steel Cutting Machine

Penta Laser (Zhejiang) Co., Ltd



Product Advantages



- 16m loading roller centering and clamping system for precise positioning and stable cutting of long bulb flat steel.
- Unloading conveyor delivers finished profiles in real time, fitting shipyard production lines.
- Equipped with 3D cutting function.
- Marking and line scribing function for directly numbering and indicating installation positions on cut parts.



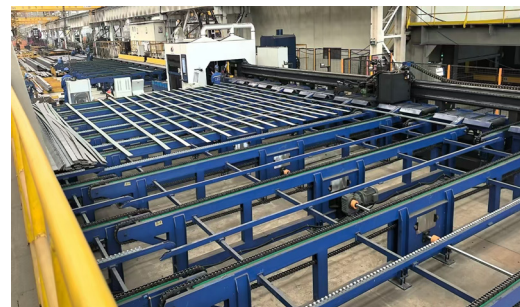
Product Specification

Specification	Parameter
Model	NWPI6030
Power	20-30kW
Max loading	16m
Accuracy	0.06mm
Repeatability	0.06mm
Rapid Speed	30m/min
Maximum Acceleration	0.3G



Product Installations

The bulb flat cutting machine has been successfully sold to China Merchants Heavy Industry (Jiangsu) Co., Ltd., with a power of 30,000W, quantity of 1 unit.



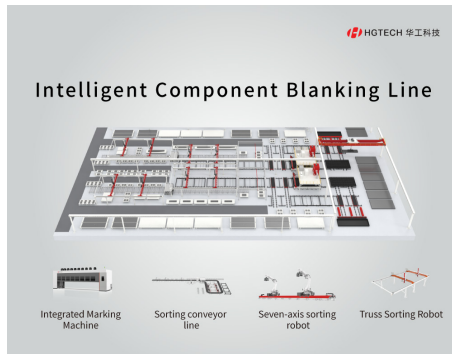


Intelligent Component Blanking Line

Huagong Technology Industry Co., Ltd.



Product composition and functions



- This production line is composed of intelligent yard management, raw material preprocessing, marking and coding, cutting (laser/plasma/flame), small-part sorting, small-part beveling, large-part sorting, large-part beveling, scrap disposal, and automated transfer. It achieves intelligent and unmanned operations throughout the entire process, from warehousing, feeding, marking, cutting, sorting, to transferring.
- Steel plate blanking automation rate: 100%; sorting automation rate: ≥95%; delivery accuracy: 100%.



Product Highlights

1. Integrated Marking Machine: Combines marking, printing, and coding, offering higher efficiency, better quality, lower operating costs, and controllable line width.
2. HG Zhushi-Intelligent Sorting & Control System: Self-developed, integrating 2D+3D+AI technologies, overcoming multiple technical challenges. Embedded with more than 20 algorithms, enabling flexible scheduling and control of the sorting line. Industry-leading technology with multiple domestic and international honors:
Recognition accuracy: ≥99%, precision: ≤1 mm
Gripping success rate: ≥99%, supporting 10,000+ part types
Sorting efficiency: doubled compared to manual sorting
3. AGV mixed-yard scheduling optimization improves delivery efficiency by 35%.



Proven Applications

This solution has been successfully deployed in more than 30 intelligent factories across shipbuilding, construction machinery, and energy equipment industries. Several factories have received national-level recognition, and the product and solution have been highly endorsed by customers.



Wuhu Shipyard Intelligent Cutting Production Line

- Supports 24/7 unmanned cutting of 14-ton-class steel plate components.
- Achieves millimeter-level positioning for ship plates up to 14 meters long with dual-arm gantry robot coordination for cutting.
- Developed specialized AI models for oversized components in the shipbuilding industry, featuring cross-scenario generalization capabilities to handle complex cutting demands across diverse environments.



Xinneng Shipbuilding Joint Workshop Intelligent Cutting and Material Handling Production Line

- Achieves fully automated cutting and material handling for 4-ton, 8-meter-class large steel plates.
- Precisely identifies hundreds of thousands of irregularly shaped workpieces, enabling fully intelligent and flexible operations throughout the entire process.
- Overcomes the technical challenges of sorting, scheduling, and palletizing in the shipbuilding industry involving multiple sections, assemblies, and flow directions, enhancing overall production efficiency.

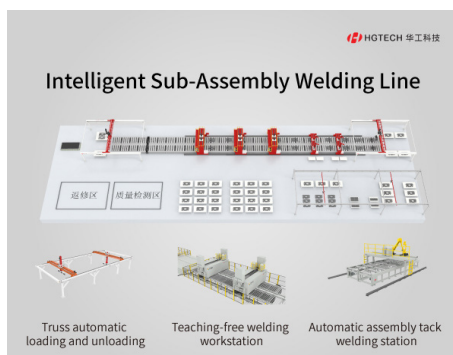


Intelligent Sub-Assembly Welding Line

Huagong Technology Industry Co., Ltd.



Product composition and functions



- This production line consists of automatic loading/unloading, robotic tack welding, teaching-free welding, touch-up and grinding, and back welding stations.
- It has overcome multiple core technologies, including machine vision-based automatic tack welding, reverse-model teaching-free welding, and welding deformation control. These innovations resolve issues such as large welding deformation and low efficiency, while integrating intelligent in-plant logistics and digital solutions to achieve flexible and intelligent sub-assembly welding.



Product Highlights

1. Automatic Tack Welding

Precision: Vision + algorithm guides robot to accurately grasp workpieces

Accuracy: Secondary positioning ensures repeatable precision

Speed: Laser tracking system guides robots to tack weld at speeds 3-5 times faster than manual work

Intelligence: Self-developed automatic assembly spot welding technology, high robot coordination

2. Teaching-Free Welding

Easy Operation: No manual teaching required. Compatible with CAD model import and non-model input. Vision system autonomously identifies and locates weld seams

Quality Control: Welding parameters are automatically applied, adjustable in real-time, and fully traceable, ensuring consistent weld formation and stable quality

Flexibility: AI vision integrated with multi-axis robotic collaboration, widely applicable to various sub-assembly welding tasks, with strong adaptability and flexible deployment



Proven Applications

This solution has been implemented in well-known domestic shipbuilding and steel structure enterprises, including Shandong Xinneng Shipbuilding, Jiangsu Kaiyang Shipbuilding, Gansu Borui, and Wuchuan Heavy Industry.

Case Example-Xinneng Shipbuilding Welding Assembly Line:

Xinneng Shipbuilding Sub-assembly Intelligent Welding Line is designed with the guiding principles of equipment intelligence, manufacturing flexibility, digital-intelligent processes, and low-carbon operation. It comprehensively considers production cycle balancing and logistics transfer to plan the optimal production line layout, ensuring smooth overall flow and high automation levels. Implementation includes the planning and integration of specialized sub-assembly welding lines, preliminary sub-assembly welding lines, and all necessary welding processes from components to finished assemblies.





Welding Fume Collection and Purification System

Southern Environment Co., Ltd.



Product Advantages



- The umbilical cable contains cables, optical fibers, hydraulic pipes, air pipes, etc., and is used to connect the surface support vessel and underwater equipment.
- Real-time monitoring of cable tension through sensors effectively protects the umbilical cable.
- The required air volume is only half of that of the traditional mixed air supply mode, and the operating energy consumption is significantly reduced.
- Three-dimensional simulation analysis of air distribution is conducted to ensure appropriate air volume design and reduce equipment investment.
- The dust removal system is not affected by the operator's usage habits, and operators are not disturbed by the dust removal system at all during work, which can greatly improve production efficiency.



Product Specification

Standard	Technical Parameter
Customizable	Tailored comprehensive solutions are designed according to the workshop's working conditions and spatial constraints, ensuring that the PC-TWA (Total Dust) concentration of welding fume in the post-purification work area meets the standard of $\leq 4\text{mg}/\text{m}^3$.



Product Installations

This system is primarily used for welding fume control in high and large workshops in the shipbuilding industry, and has now been successfully extended to the rail transit industry. Currently, the system has been applied in pilot projects for welding fume control in workshops of several large domestic enterprises, including Guangzhou Shipyard International, Chongqing Changzheng Heavy Industry, Western Steel Structure, China Shipbuilding Power, and Jiangsu New Yangzi, etc. The practical application results have been remarkable and have received high praise from the owners and experts.



HAN'S LASER
大族激光 智能装备集团

Linear Rail Large Format Laser Cutting Machine

Han's Laser Smart Equipment Group Co.,Ltd.



Product Advantages



- The working area can be customized, the Length of 6m and above is unlimited, and the width size can be selected from 2m-7m.
- Modular assembly, the worktable is fully separated from the machine bed.
- Bevel cut is available and can be cut at any angle within the range of 0° to ±45°.
- Offers optional scribing functions: inkjet, laser, and hot zinc spray.
- Large-section base for linear rails, precision machined in-house, ensuring precision.
- When the format width is below 4.5m, high-rigidity extruded beam is adopted, guaranteeing the long-time cutting stability in different circumstances.



Product Specification

Machine Type	Working Area	Max. Positioning Speed (X/Y)	Repeatability (X/Y)	Machine Size	Machine Weight
G26035L	26000mm×3500mm	70m/min	X: 0.05mm/10m; Y: 0.06mm (full length)	About 32m×5.4m ×2.1m	About 10 tons

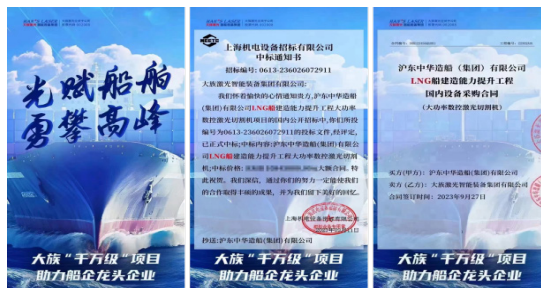


Product Installations

In the field of shipbuilding and marine engineering manufacturing. Many leading enterprises are already using this wire rail laser cutting equipment, from Guangzhou Shipyard International, CSSC Huangpu Wenchong Shipbuilding, and CCCC Fourth Harbor Engineering in southern China, to HUDONG-ZHONGHUA Shipbuilding, IMC Shipyard, Longshan Shipyard, and Zhenjiang Shipyard in eastern China, and then to the northern region of the Bohai Shipbuilding Heavy Industry, CIMC RAFFLES, etc.. Including Shipbuilding Offshore Supporting Enterprises-Sany Ocean Heavy Industry, Nantong Marine Machinery Group, etc., all of them have purchased Han's Laser Linear Rail Large Format Laser Cutting Machine.

At the end of 2023, Han's Laser Smart Equipment Group won the bid for the high-power CNC laser cutting machine project of HUDONG-ZHONGHUA Shipbuilding Group for the LNG Shipbuilding Capacity Upgrading Project. The project total amount of the project exceeds 10 million yuan, and all the machine models are Linear Rail Large Format Laser Cutting Machine of Han's Laser, HUDONG-ZHONGHUA Shipbuilding Group has now become another classic shipbuilding enterprise user of this product.

Introduce the sales performance and case studies of the product. Introduce the sales performance and case studies of the product. Introduce the sales performance and case studies of the product.



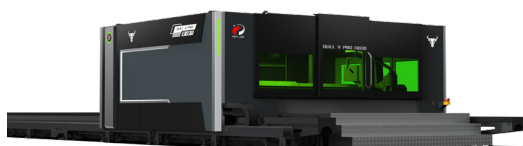


BULL V PRO Laser Cutting Machine

Penta Laser (Zhejiang) Co., Ltd



Product Advantages



- Large working area (12-26 m) for cutting large ship plates and profiles.
- Supports 0-45° bevel cutting for hull cutting requirements.
- Modular bed design with extendable length for various ship types.
- Fully enclosed structure with efficient dust removal for safety and cleanliness.



Product Specification

Specification	Parameter
Model	BULL V PRO
Power	12-80kW
Table Travels	12000mmx3000mm(3500mm)-36000mmx3000mm(3500mm)
Accuracy	X:0.25mm~1.2mm;Y:0.05mm
Repeatability	X:0.10mm~0.50mm;Y:0.03mm
Mobile Peripherals Maximum Movement Speed	40m/min
Rapid Speed	110m/min
Maximum Acceleration	1.1G
Option	Bevel/Zinc Powder Line Marking/Lnkjet Marking



Product Installations

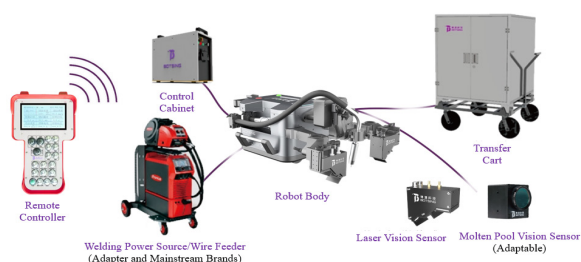
To date, the "Bull V" Series laser cutting machines have sold 278 units, totaling RMB 473.2 million. In shipbuilding, they are in use at leading yards such as CM Jinling Dingheng, CMHI Shenzhen, Jiangnan Changxing, Hudong-Zhonghua, Waigaoqiao, and Wison Nantong, delivering efficient cutting for large hull structures and thick plates.



博清科技 BOTSING **Trackless All-Position Crawling Welding Robot**
 Beijing Botsing Technology Co., Ltd.



Product Advantages



- No need for track laying or manual guidance, freely crawls by attaching to ferromagnetic workpiece surfaces
- On-site automatic tracking welding in all positions (horizontal/flat/vertical/overhead/curved surfaces) for large structural components
- Stable operation for extended periods in high-temperature environments (workpiece surface temperature 180°C)
- Real-time automatic seam tracking, no teaching required, no pre-scanning needed



Product Specification

Model	Overall Dimension	Weight	Travel Mode	Curved Surface Diameter for Travel	Max Obstacle-crossing Height	Laser Tracking Accuracy	Max Travel Speed	Max Welding Speed
BOT-WTP20-121	540*510*255mm (L*W*H)	18KG	Wheel-type	168mm~800mm	3mm	±0.5mm	1500mm/min	400mm/min
BOT-WTA20-122	670*590*300mm (L*W*H)	25kg	Wheel-type	≥800mm	3mm	±0.5mm	1500mm/min	400mm/min
BOT-WTA20-322	480*620*310mm (L*W*H)	36kg	Track-type	≥6000mm	5mm	±0.5mm	1500mm/min	400mm/min
BOT-WTA10-421	733*404*370mm (L*W*H)	34kg	Track-type	≥6000mm	5mm	±0.5mm	1500mm/min	400mm/min
BOT-WTA-441	820*395*322mm (L*W*H)	45kg	Track-type	≥6000mm	8mm	±0.2mm	1500mm/min	400mm/min



Product Installations

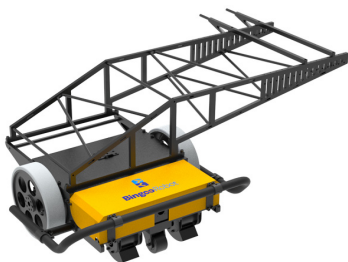
The trackless all-position crawling welding robot has driven disruptive innovation and application across industries such as petrochemicals, shipbuilding, construction steel structures, rail transit, energy and power, and nuclear power engineering. It has been deployed in major projects by central enterprises including CSSC, Sinopec, CIMC, and CNNC, generating direct economic benefits of nearly 1 billion RMB. The product holds a dominant market share in domestic niche markets. In recent years, Botsing Technology has focused on the shipbuilding industry, launching technical breakthroughs and integrated intelligent manufacturing solutions for the automated welding of large ocean-going vessels.



 彼合彼方 Spray Painting Robot
BingooRobot BingooRobot Co., Ltd.



Product Advantages



- **Enhanced Safety & Stability:**
Replaces hazardous manual spray painting operations at heights, ensuring personnel safety.
- **Proven Performance:**
Compatible with most coatings, delivering superior film quality and uniform thickness.
- **Cost & Eco Efficiency:**
Reduces paint consumption and VOC emissions by approximately 20% compared to manual methods.
- **Intelligent Operation:**
Features wireless remote control and preset programs for minimal training and effortless use.



Product Specification

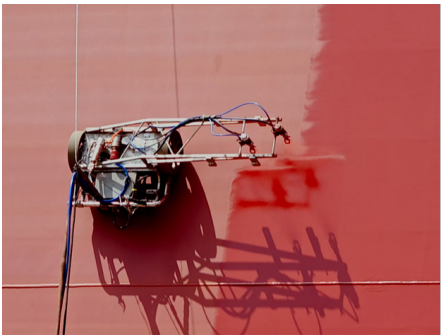
Dimensions (L*W*H)	570×1530×500mm
Weight	78kg (Painting Accessories Included)
Load Capacity	100kg
Moving Speed	0-30m/min
Protection Level	IP54
Obstacle Crossing Ability	6mm-high Weld
Working Width	600-800mm
Adaptability	Large Flat Vertical Surface



Product Installations

BingooRobot Co., Ltd. is a technology company providing specialized robots and integrated solutions. We have developed over 20 types of magnetic crawler robots to perform vertical surface derusting, spray painting, surface roughening, and inspection operations for shipbuilding and repair industry, establishing the world's first intelligent robotic system covering the entire ship anti-corrosion workflow. Our products' technical specifications have been certified as internationally advanced by the Chinese Society of Naval Architects and Marine Engineers.

Deployed at over 10 leading Chinese shipyards including CSSC, COSCO, and CMG, our robots hold a top-tier global market share among magnetic crawler developers. They significantly enhance operational quality and efficiency, substantially reduce maintenance costs, and effectively safeguard worker health and safety.





Vacuum ultra-high pressure water jetting system for ship anti-corrosion pretreatment

IMC Shipyard (ZhouShan) Co.,Ltd.



Product Advantages



- Operational efficiency is increased by more than 5 times compared to traditional methods
- High surface cleanliness after processing, with superior quality
- High manufacturing precision, key components are made of specially selected materials for extended service life
- Sustainable automatic operation, real-time monitoring and adjustment of equipment status
- Energy-saving, simplified system design
- Uses water as the medium, no waste grits or chemical additives
- Environmentally friendly process, zero dust emissions, automatic filtration and separation of wastewater and residue
- Significantly improves the working environment, greatly enhancing the health of operators and nearby residents
- Simple operation, works can be completed by a single operator



Product Specification

Vacuum Ultra-High Pressure Water Jetting Device	Vacuum Recovery and Treatment Device	Ultra-High Pressure Water Pump Unit	Ultra-High Pressure Water Hose
Max. Working Pressure: 3200bar	Flow Rate: 1200m ³ /h	Max. Working Pre.: 3200bar	Working Pressure: 300MPa
Max. Rotation Speed: 3200r/min	Power: 18.5kW	Flow Rate: 26l/min	Burst Pressure: 700Mpa
Effective Working Width: 250 mm	Vacuum Pressure: -400mbar	Power: 160kw	Inner Diameter: Φ7.6mm
Max. Reaction Force: 380 N	Sewage Pump Power: 0.75kW	Max. Inlet Water Temp.: 40°C	Outer Diameter: Φ19.3mm
Weight: 80kg	Filter Mesh Size: 10.0μm	Min. Inlet Water Pre.: 2bar	Weight: 1.1Kg/m Impact Resistance: >20,000cycles



Product Installations

The vacuum ultra-high-pressure water jet ship anti-corrosion pretreatment system is a technological solution independently developed and manufactured by our company that was first successfully applied in ship dock repair coating and anti-corrosion pretreatment. As an international pioneering innovation, it has led the development of ultra-high-pressure water-related equipment and process technologies in the global industry.

This technological solution covers both the domestic and international ship markets, achieving a technical market share exceeding 90%. It has been widely adopted in the ship repair industry, with our products exported to markets worldwide.



ROBOT Hydroblasting Robot-HighMate V40 Ultra

史河机器人 RobotPlusPlus



Product Advantages



- **Strong curvature adaptability:** minimum circumferential operation radius can reach 0.5 m, and cover more than 98% of the ship hull. Complicated curved surfaces including bulbous bow, bilge keel and reversed stern can all be covered.
- **Excellent obstacle crossing performance:** the robot can pass over concave and convex area, waterlines and weld seams on the ship hull, with a maximum obstacle-crossing height over 25mm.
- **Stable attachment ability:** innovative four-wheel flexible magnetic platform design allows the wheel sets to have more degrees of freedom to better adhere to the curved surface, preventing the risk of falling.
- **High level of intelligence:** offers three operation modes: manual, one-key lane changing and auto-navigation. Significantly reduce labour intensity with the highly automated system.
- **Wide range of application:** other than ship repairs, the robot can be used for storage tanks, spherical tanks, bridges and other industries.



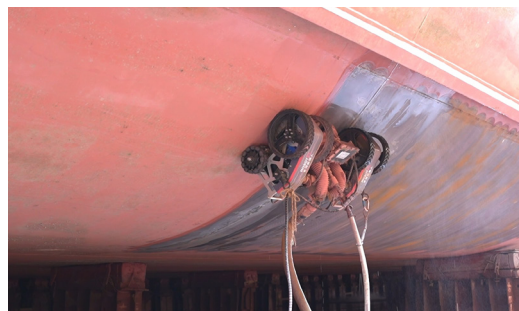
Product Specification

Hydroblasting Robot - HighMate V40 Ultra			
Production Rate	35-55 m ² /h	Dimensions	942x547x400 mm
Weight	89 kg	Working Width	250/310 mm
Maximum Pressure	3000 bar	Protection Level	IP65
Maximum Flow Rate	52 L/min	Minimum Curvature	0.5 m



Product Installations

This product is the latest hydroblasting robot developed by RobotPlusPlus. Featuring the innovative four-wheel flexible magnetic platform design, the robot offers strong curvature adaptability, excellent obstacle crossing performance, stable attachment ability, advanced intelligence and wide range of applications. It is capable of covering over 98% of the ship hull surface preparation. Furthermore, it can be connected to a recovery pump to achieve highly efficient waste recovery, making it an all-around robotic solution.



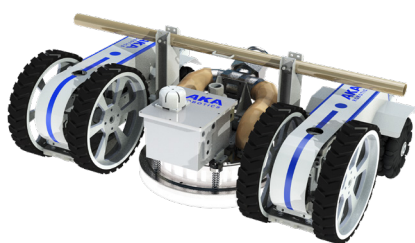


Wallhiker W-06 Climbing Robot for Ship Rust Removal

Shenzhen AKA Robotics Technology Co., LTD.



Product Advantages



- Adaptable to over 98% of ship hull curved surfaces, eliminating risks of complete detachment.
- 25mm obstacle-climbing capability effortlessly clears obstacles like stepped welds, drain outlets, and waterline markers, ensuring continuous operation.
- Lightweight, modular design optimized for swift deployment.
- Monitor device status in real-time and conduct rapid fault diagnosis via the self-developed mobile app, enabling efficient remote maintenance operations.



Product Specification

Specification	Parameter
Operating pressure/Max pressure	3000Bar
Max moving speed	10m/min
Diameter of derusting	250/300mm
Efficiency of derusting	30~50m ² /h
Weight	150kg
Load	83kg
Size	940×655×365mm
Level of derusting	Wa2.5

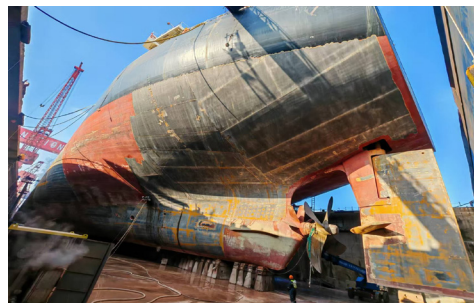


Product Installations

XingzhiXing Robotics is a National High-Tech and “Little Giant” Enterprise specializing in R&D, manufacturing, and sales of specialized robots. We serve shipbuilding, petrochemical storage tanks, and wind power industries with robotic solutions and equipment for derusting, cleaning, spraying, and grinding.

In the shipbuilding sector, we support China’s green development strategy, advancing green ship repair and manufacturing.

Our products are deployed at leading shipyards under CSSC, COSCO, and China Merchants Group, earning high client praise.



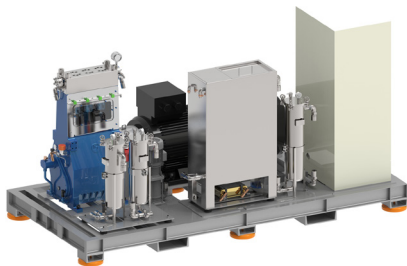


Ultra-high pressure water jet ship
rust removal complete

COSCO(Nantong)Clavon Ship Engineering Co., Ltd.



Product Advantages



- UHP pump unit is the core equipment of green ship repair surface treatment. With clean water source as the medium, through the recipro-cating movement of the high-precision plunger and the volume change of the hy-draulic end chamber, the intake and discharge valve body linkage, the water medium is supercharged, and the high energy striking medium is provided for all kinds of rust removal execu-tion devices.



Product Specification

Model	LC-E/D-3HP42-280	LC-E/D-3HP45-300
Dimension (mm)	4070*2120*2400	4070*2120*2400
Power (kw)	250	280
Pressure (MPa)	280	300
Flow (l/min)	42	45
Pump speed (r/min)	428	565
Plunger number (pc)	3	3
Plunger dimension (mm)	18	18
Plunger travel (mm)	130	100
Weight (T)	6.0	6.8



Product Installations

The comprehensive production efficiency & energy consumption per unit, and the maintenance cost per unit are all at the leading level in China.

The product has superior performance and is highly favored by the market. As of June 2025, over 200 sets have been sold cumulatively, serving customers including domestic shipbuilding and repair enterprises, professional coating and anti-corrosion companies, and other fields markets.





南通中远克萊芬船舶工程有限公司
COSCO (NANTONG) CLAVON SHIP ENGINEERING CO.,LTD.



COSCO(NANTONG) CLAVON SHIP ENGINEERING CO.,LTD.

Nantong COSCO Kleven Ship Engineering Co., Ltd. is a wholly-owned subsidiary of Nantong COSCO Shipping Shipyard Engineering Co., Ltd., which is under China COSCO Shipping Group / COSCO Shipping Heavy Industry. Established on July 6, 1991, it is a national high-tech enterprise, as well as the Jiangsu Engineering Research Center for Green Repair and Construction of Ship and Marine Equipment / Green Technology Promotion and Application Center. The company is located in Nantong City – one of China's first batch of coastal open cities – on the north bank of the Yangtze River estuary.

Adhering to the principles of "customer-centricity, market orientation, and service as the foundation", the company focuses on the "two new tracks" of new energy supporting business and digital-intelligent manufacturing. Closely following the new development trends of "green, low-carbon, and intelligent", it continuously increases investment in scientific research and promotes industry-university-research cooperation, steadfastly advancing the enterprise's high-quality development strategy.

The company is constantly deepening the value creation mechanism of "strengthening, supplementing, and extending the industrial chain", upholding the principle of win-win cooperation through industrial chain synergy, to provide customers with high-quality and efficient products and services. Its professional businesses include: R&D, sales, engineering application and technical services of complete sets of green ultra-high pressure water derusting and green intelligent coating equipment for ships and offshore engineering; engineering research and application of new energy products; cabin painting and anti-corrosion engineering; BS scaffolding and aerial work equipment engineering; high-pressure pipeline cleaning; processing and sales of marine products such as high-end flanges; special equipment leasing; and R&D and sales of intelligent safety protection equipment.

Boasting a team of senior professionals with rich experience and exquisite skills as well as a modern management team, the company is committed to providing full-life-cycle solutions for green and intelligent coating equipment in the ship and offshore engineering sector, and building a leading domestic and world-class high-tech enterprise of "green marine supporting equipment" with core competitiveness.

Ultra-high pressure pump unit



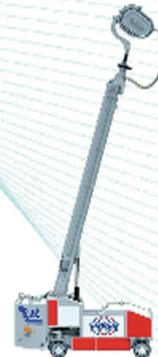
Wall-climbing rust removal robot



Remote-Controlled Dock Bottom Derusting Robot



Remote control long-arm rust removal robot



spraying robot



Remote control flat bottom rust removal car



COSCO(NANTONG) CLAVON SHIP ENGINEERING CO.,LTD.

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POSTCODE: 226005

TELEPHONE: +86-513-83549798



Equipment for Treating Organic Waste Gas from Painting in the Shipbuilding Industry

Southern Environment Co., Ltd.



Product Advantages



- In light of the features of intermittent emissions at different stages of segmented painting, large concentration fluctuations, and high peak concentrations, the treatment process of multi-stage pre-filtration combined with thermal oxidation technology (CO or RTO) is employed. Through intelligent monitoring and control measures, the low-energy consumption operation and high-efficiency treatment of the organic waste gas treatment system in the ship segmented painting workshop are realized.
- Ensure national or local emission standards
- economy, low energy, and convenient
- Intelligent control, safe and stable operation.



Product Specification

Air Volume (m ³ /h)	Process Technology	Maximum Instantaneous Exhaust Concentration(mg/m ³)	Zeolite Rotor VOCs Purification Efficiency	CO Purification Efficiency	Comprehensive Purification Efficiency	Others
0-170000 customizable	Zeolite Rotor Adsorption + CO/ RTO	1200	≥98%	≥98%	≥96%	Complies with local or national emission standards



Product Installations

This technology is applied in the following VOCs projects of shipyard painting:

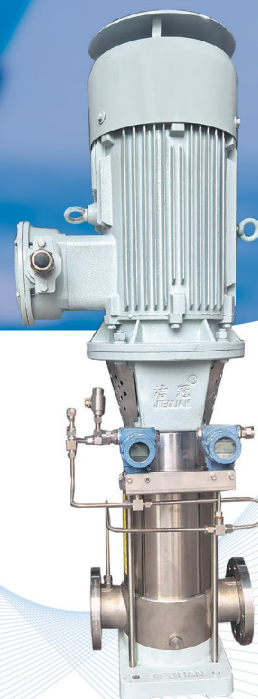
1. workshops.Jiangsu New Yangzi Shipbuilding Co., Ltd.
2. Jiangsu Yangzi Xinfu Shipbuilding Co., Ltd.
3. Guangzhou Shipyard International Co., Ltd.
4. CSSC Huangpu Wenchong Shipbuilding Co., Ltd.
5. Zhoushan Changhong International Shipbuilding & Repair Co., Ltd.
6. COSCO Shipping Heavy Industry (Guangdong) Co., Ltd.
7. Wuchang Shipbuilding Industry Group Co., Ltd.
8. Jiangmen Nanyang Ship Engineering Co. Ltd.



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 Tel: +86-13925019001 E-mail: Nfhj_DQHJ@chinagsi.com

ZHANGJIAGANG PACIFIC PUMP MANUFACTURING CO.,LTD.

Over the past 18 years since its establishment, the company has relied on technological innovation in the shipbuilding industry to independently develop high-performance Marine magnetic pumps to address the shortcoming of "leakage and seepage" in key equipment pumps in the shipbuilding field. By leveraging the two core technologies of leak-free magnetic drive and medium pressure difference self-circulation cooling, it has overcome the pain point of easy leakage in traditional mechanical seals and has become one of the leading enterprises in the domestic Marine leak-free pump field.



Marine Magnetic Pump

The products have successively obtained type approval certificates from classification societies in China, the United States, the United Kingdom, France, Germany, Italy, Norway, Japan, Russia and South Korea. A total of 2 national invention patents and 30 utility model patents have been applied for and obtained. In 2014, it was awarded the Class I certificate for adopting international standards by the National Standardization Committee. In 2021, it was awarded the title of A-level Industrial Enterprise Quality Credit in Jiangsu Province. In 2024, it won the Excellent Award in the National Machinery Industry Product Quality Innovation Competition organized by the China Machinery Industry Federation. The company helps downstream shipyards and end users reduce procurement costs and shorten supply cycles in the supply chain, thereby enhancing the value and competitiveness of the entire industrial chain.

In December 2024, the "Technical Requirements for Marine Magnetic Drive Multi-Stage Vertical Centrifugal Pumps" compiled by the company was approved for project initiation as a group standard by the China Shipbuilding Industry Association, filling the gap in industry standards.



DL Marine vertical
multistage
centrifugal pump

Add: Zhangjiagang city, jiangsu province economic
development zone is pole number138

Sales Hotline: +86-512-58269316 58990203
E-mail: sales@pacificoceanpump.cn

JANGSU XINHANG SHIP TECHNOLOGY CO., LTD.

Jiangsu Xinhang Ship Technology Co., Ltd (former SMMC Marine Drive Systems (SUZHOU) CO.,LTD) is high-tech enterprise established in 1975, in R&D and manufacture of special propulsion system, including Controllable-Pitch Propeller, Tunnel Thruster and Azimuth Thruster.

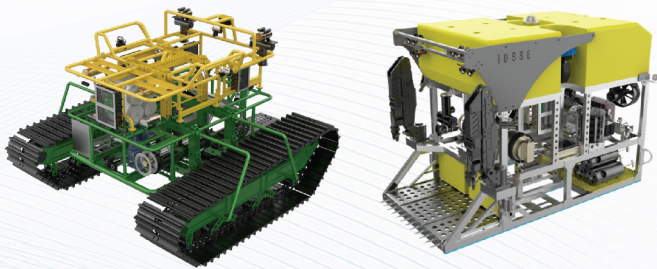
SMMC is the first domestic enterprise to realize the industrialization of propulsion C P P and specialized in the manufacture of Controllable-Pitch Propeller and Tunnel Thruster as well as the ancillaries to these three product portfolios. We are able to provide solutions and products through system integration, including the mechanical, electroute and hydraulic systems.

China's Leading Marine Propulsion Manufacturer Providing complete marine propulsion system solutions.

- Long History – Established in 1975
- Large-Scale Production – Over 2,500 units delivered and installed on vessels
- Comprehensive Product Range – Controllable pitch propellers (CPP), azimuth thrusters, and side thrusters, totaling more than 70 specifications and models



SMMC of China, SMMC of World Explore the New World of the Ocean



R&D ability

50 years of experience accumulation and precipitation, pure KAMEWA and SCHOTTEL technology, with over 100 professional engineering and technical personnel including researchers and senior engineers

Cooperated with the Dutch MARIN Royal Basin for hydrodynamic research, using the same hydrodynamic calculation software as world-renowned propeller brands (Rolls-Royce, Wärtsilä, SCHOTTEL, etc.) and DP manufacturers (Kongsberg, etc.)

Long-term cooperation and exchanges with research institutes such as 701, 702, 704, 708, 711, and universities such as Shanghai Jiao Tong University, Naval University of Engineering, Jiangsu University of Science and Technology

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ZHEJIANG YITAI POWER
TECHNOLOGY CO., LTD.

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艺行天下 泰然处之



Zhejiang Yitai Electric Technology Co., Ltd., located in Xiangyang Industrial Zone, Liushi Town, Yueqing City – known as the "Capital of Electrical Appliances in China" – is a comprehensive low-voltage electrical manufacturing enterprise integrating design, development, production, and sales.

Specializing in manufacturing low-voltage circuit breakers, contactors, and inverters, our products serve diverse sectors including construction, marine vessels, mechanical equipment, power supply facilities, transportation, and postal & mining industries. Our portfolio encompasses AC/DC systems, leakage current protection devices, and intelligent solutions, all certified by China Classification Society (CCS) and Bureau Veritas (BV) Factory Certification.

Through continuous innovation and optimization, we have achieved significant enhancements in product aesthetics, technical performance, stability, and reliability. As a result, we stand as a stable and competitive enterprise within China's electrical manufacturing landscape.

📍 No. 42, Kesi Road, Xiangyang Industrial Zone, Liushi Town,
Yueqing City, Wenzhou City, Zhejiang Province.

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Ballast Piping System

DHW/CW Piping System

Deep-Sea Aquaculture Net Pen System

Zhenjiang Offshore & Ship Piping Engineering Technology Research Center

Company Profile



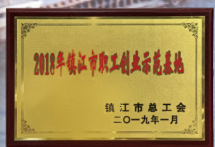
- ◆ Zhenjiang Jingyu Pipeline Equipment Co., Ltd. is a national high-tech enterprise specializing in the production of plastic pipes and fittings ranging from 20mm to 1200mm in diameter.
- ◆ "A modern production base of nearly 26,000 square meters, featuring integrated offices and an independent testing laboratory."
- ◆ Multiple specialized production lines including plastic pipe extrusion equipment, pipe fitting injection molding machines, professional machining equipment, and molds in various specifications."
- ◆ "Maintains a team of technical professionals, construction specialists, and after-sales service personnel, with active R&D collaborations with universities and research institutions."
- ◆ "Offers integrated end-to-end services spanning production, design, R&D, sales, and installation—delivering systematic one-stop solutions to clients."
- ◆ It has obtained a range of certification credentials, including ISO 9001/14001/45001 certifications (the three core ISO management systems), pressure pipeline production certification, factory qualification certifications from nine classification societies, EU drinking water compliance certification, and Jiangsu Provincial Water-related Safety Certification. Additionally, it holds 2 invention patents and over 30 utility model patents.

Core Product Lines

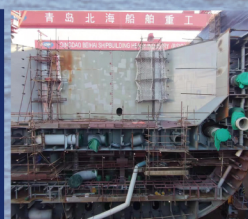
- ◆ Marine-grade High-Density Polyethylene (PE100) Piping Systems & Fittings
- ◆ Marine Heat-Resistant Polyethylene (PERT) Piping Systems & Fittings
- ◆ Marine Homopolymer Polypropylene (PPH) Piping Systems & Fittings
- ◆ Marine Random Copolymer Polypropylene (PPR) Piping Systems & Fittings
- ◆ Marine -Crystalline Polypropylene (PP-RCT) Piping Systems & Fittings
- ◆ Marine Polybutene (PB) Piping Systems & Fittings



Corporate Honors



Vessel-Related Cases



To Strengthen Shipbuilding Supply Chain.



China Association of the National Shipbuilding Industry

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