

MT POWER



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**SMART MARINE
POWER SYSTEM
INTEGRATOR**

MT POWER LIMITED

ENGINEERING FOR
MARINE AND OIL&GAS

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ENGINEERING FOR
MARINE AND OIL&GAS

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COMPANY PROFILE

Pioneering Marine Technology

MT POWER LIMITED originating from Zongming Shipyard founded in 1979, is rooted in Quanzhou, Fujian—the starting point of the Maritime Silk Road. Forged from a 40-year legacy, MT POWER is an innovator in marine equipment technology. From our base in Quanzhou, the historic start of the Maritime Silk Road, we have grown into a fully integrated enterprise, driving progress from R&D and manufacturing to global sales and service. Our 20,000-square-meter intelligent manufacturing hub is at the core of our capabilities. It features an advanced testing center with a 15,000 kW parallel load capacity and a 3,700 kW hydraulic dynamometer. Our successful completion of IMO Tier III international emissions tests places us at the forefront of green propulsion technology. At MingTai, our growth is fueled by a commitment to technology and talent. Our team of over 240 professionals has built a global reputation, establishing trusted partnerships with shipyards and shipowners worldwide. Our projects across the globe are a testament to Chinese ingenuity in the maritime industry.

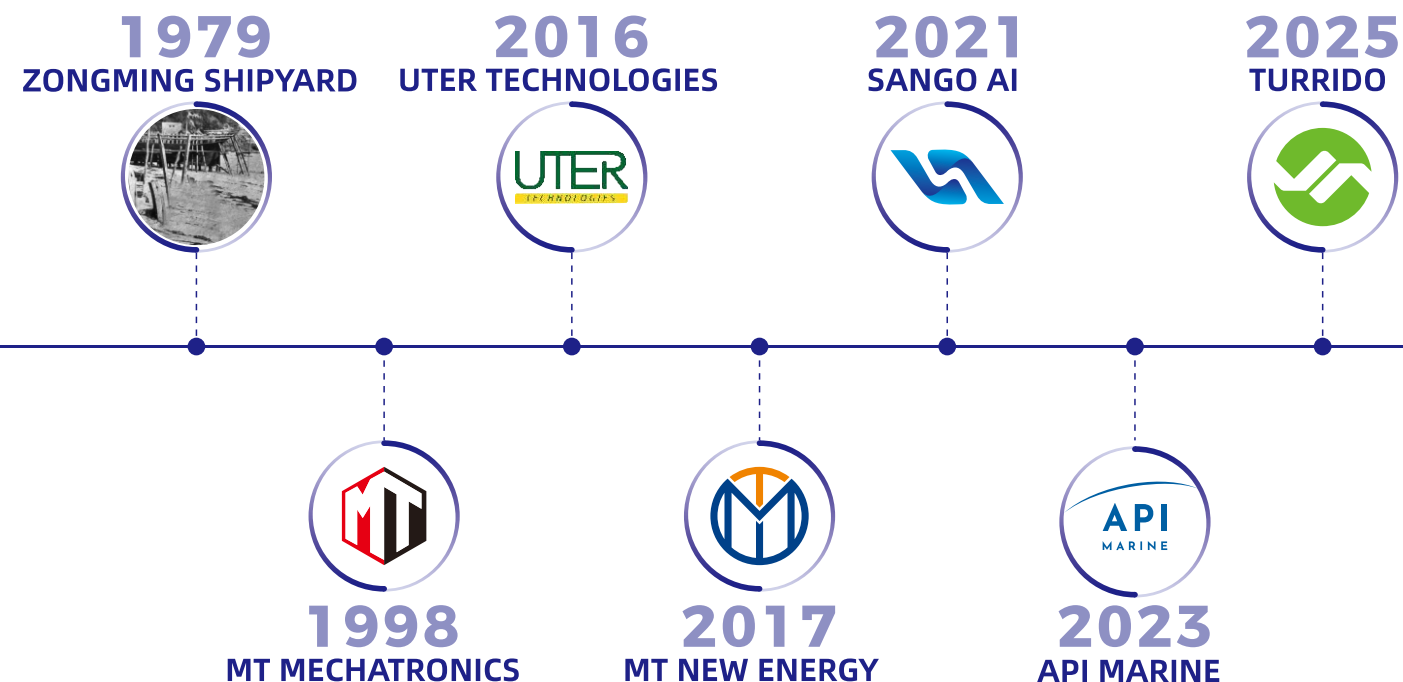
An Integrated Ecosystem for Innovation

We are focused on the future of the industry through our four core divisions: Propulsion, Automation, New Energy, and Smart Systems. By working in synergy, we are collectively advancing the high-quality development of China's marine industry.

Globally Certified Quality: With in-house R&D, our products are certified by major classification societies (CCS, ABS, DNV, DNV/GL, BV, LR, KR, RS, etc.) and our factories are certified to ISO 9001, ISO 45001, and ISO 14001 standards.

Proven Experience & Vision: We have successfully delivered thousands of systems to over 100 global clients. Our mission is to lead the industry through continuous optimization.

Integrated Modern Facility: Our intelligent factory, launched in 2021, integrates R&D, manufacturing, testing, and warehousing.



Core Capabilities

- Workshop Area: 17,900 m² covering R&D, production, testing, and warehousing
- Annual Capacity: 800 marine generator sets
- Cumulative Deliveries: Over 10,000 units, serving global shipowners, shipyards, and offshore clients
- Testing Capacity: Six independent test platforms with total power up to 15,000 kW
- Warehousing Area: 2,900 m² ensuring efficient supply chain and delivery capability

Specialized Workshops

- Power System Assembly Workshop
- Valve Control & Automation Workshop
- New Energy R&D Laboratory

Product Scope

The factory is responsible for the manufacturing and testing of MT Power's core products, including:

- Marine Generator Sets (Main Gen, Emergency Gen, and Electric Propulsion)
- Valve Remote Control & Tank Level Gauging Systems
- Diesel-Electric / Hybrid / All-Electric Propulsion Systems
- Shaft Generator Frequency Conversion Systems
- Distribution Panels & Power Control Systems

MT POWER LIMITED

The Heart of Propulsion: Reliable Power at Sea
As the headquarters of the MT group, we specialize in the R&D and manufacturing of marine propulsion systems. We deliver stable, efficient, and eco-friendly power solutions for a wide variety of vessel types.

- Main Products:
- Generator sets
 - Diesel Engine & Gearbox
 - Main engine remote control systems
 - Explosion-proof generator sets

UTER TECHNOLOGIES LIMITED

Intelligent Automation: Enhancing Maritime Safety and Efficiency
UTER TECHNOLOGIES is dedicated to the research, development, and integration of marine automation systems. These systems are widely used in a variety of vessels and offshore engineering projects, elevating the safety and intelligence of maritime operations.

- Main Products:
- Ship monitoring and alarm systems
 - Liquid cargo management systems
 - Offshore environmental monitoring systems

TURRIDO LIMITED

Smarter Propulsion: Driving Efficiency and Sustainability
Turrido Systems specializes in intelligent marine power, providing complete solutions from new energy applications to retrofitting traditional vessels for higher efficiency, reliability, and environmental performance.

- Main Products:
- Marine Electric Propulsion Systems
 - Hybrid propulsion systems
 - Pure electric propulsion systems
 - Shaft generator frequency conversion systems
 - Thruster control systems
 - Smart energy management systems (PEMS/EMS)
 - Marine frequency converter control systems

XIAMEN MINGTAI SHIP NEW ENERGY CO., LTD.

Sustainable Power: Unlocking the Potential of Electric Drive
MingTai New Energy focuses on the research and innovation of new energy electric drive systems. We serve a broad range of sectors, including new energy vessels and green port development, helping to accelerate the industry's transition toward a zero-carbon future.

- Main Products:
- AC PDS
 - DC-link inverter/rectifier bus
 - Marine high-voltage shore power systems
 - Energy storage power supplies

SANGO MARINE AI TECHNOLOGY PTE. LTD.

Smart Navigation · Leading a New Era of Intelligent Shipping
Sango AI focuses on developing ship intelligence systems, improving automation and smart operation, and building a central brain for future maritime transport.

- Main Products:
- Digital ship system
 - Shore-based command center system
 - Ship intelligent system
 - Unmanned engine room system

API MARINE (DENMARK)

Global Experts in Tank Gauging & Valve Control
API Marine specializes in high-end solutions for ship tank level systems and valve control, widely applied on oil tankers, LNG carriers, bulk carriers, and container ships. With proprietary sensor technology and automation systems, API Marine provides accurate and reliable tank management for global clients.

- Main Products:
- Level / temperature / pressure sensors
 - Hydraulic / electric / electro-hydraulic actuators
 - Loading computers
 - Valve remote control systems
 - Tank level telemetry systems
 - Anti-heel systems
 - Hull deflection measurement systems





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MARINE POWER SYSTEM

Diesel Engine, Gearbox, Remote Control Of Main Engine, Generator Set, Offshore Wind Power
Yaw Power Supply, Explosion-proof Unit

MARINE POWER

Cummins Marine Generator Sets ▼

Power Range:

40KW-3000KW

Engine Models:

6B, 6C, 6L, QSB7

QSM11, K19, K38

K50, QSK50, QSK60, QSK95



Cummins Marine Engines ►

Power Range:

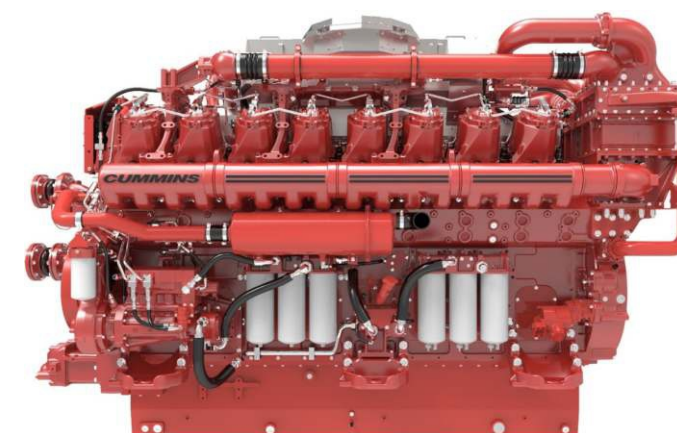
90KW-3132KW

Engine Models:

6B, 6C, 6L, QSB7

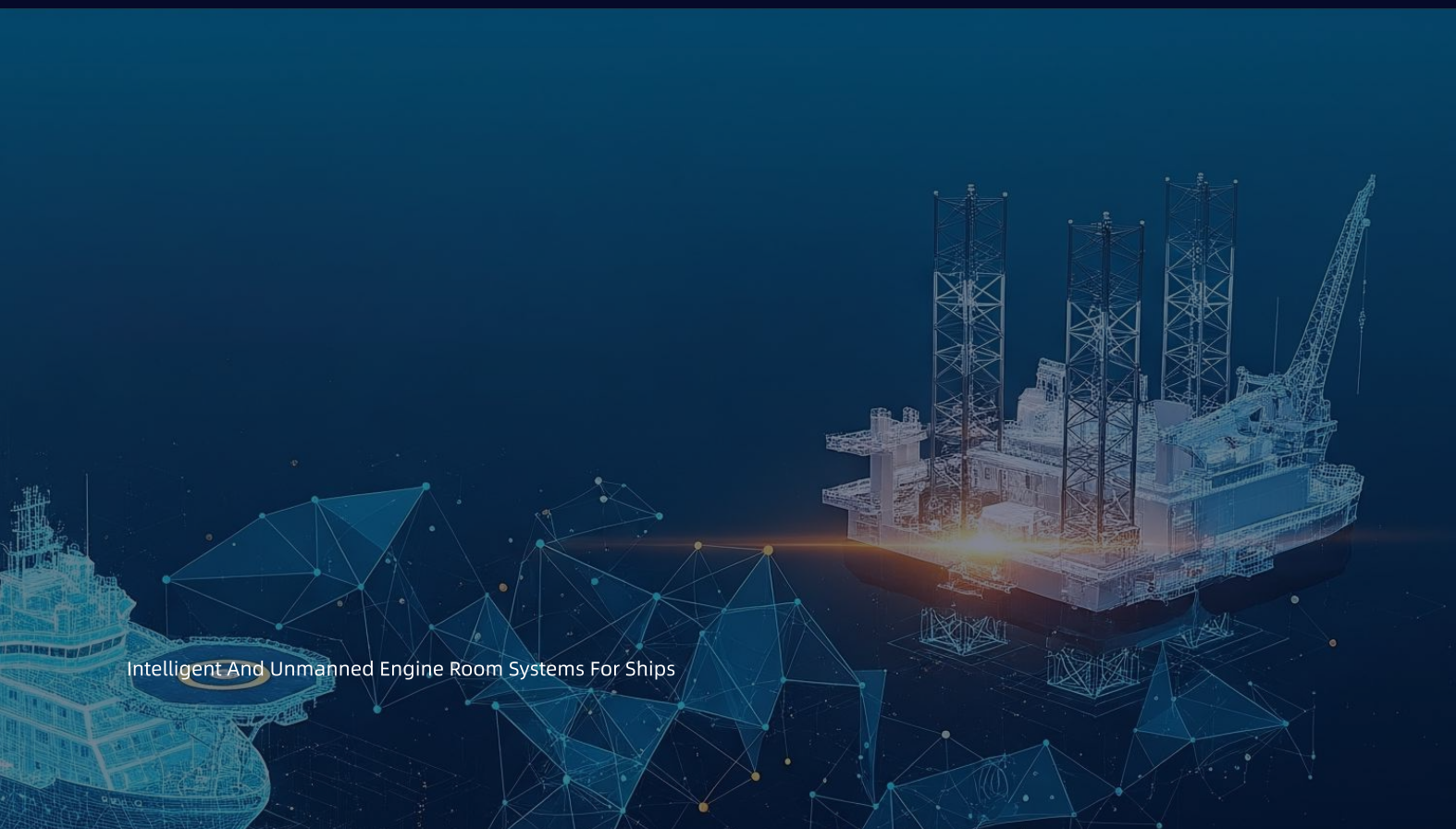
QSM11, K19, K38

K50, QSK50, QSK60, QSK95



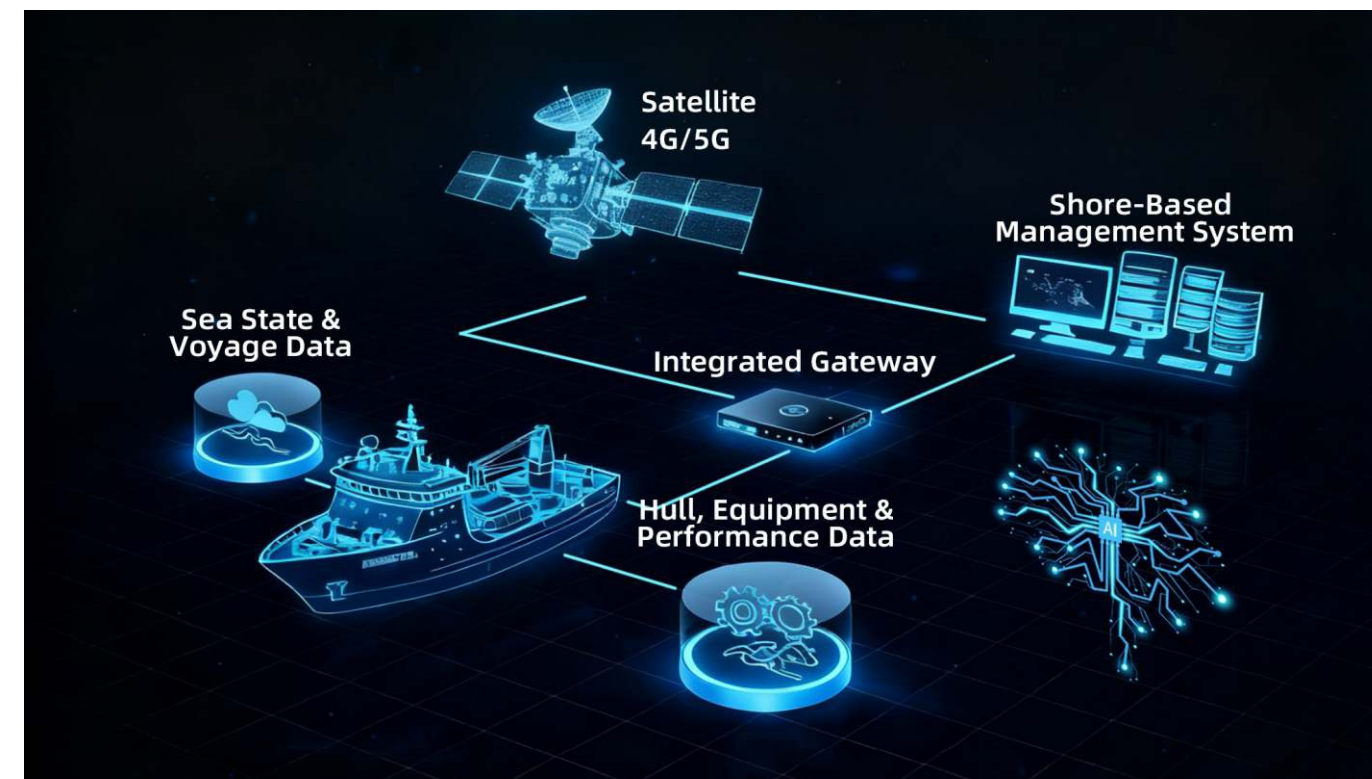
03

SMART VESSEL SYSTEM



Intelligent And Unmanned Engine Room Systems For Ships

SMART FLEET MANAGEMENT SYSTEM



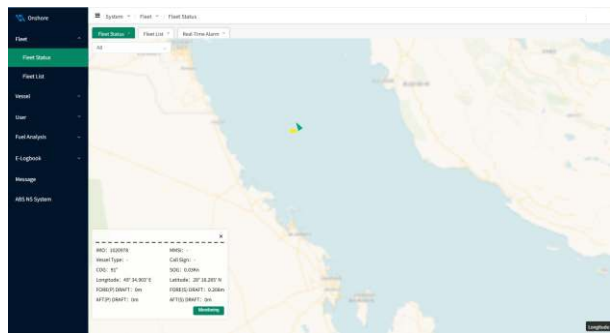
Technical Feature

- Digital Twin: 3D & AR models for seamless ship-to-shore collaboration.
- IoT Fleet Monitoring: Real-time, automated equipment data for centralized fleet oversight.
- AI-Powered Diagnostics: Edge and cloud AI for high-precision equipment fault prediction.
- Digital Operations Management: Tools for route optimization, predictive maintenance, and fuel efficiency analysis.

Main Functions

- Hull and engine room parameter monitoring
- Vessel performance analysis and evaluation
- Alarm system
- Remote support and fault diagnostics
- Intelligent navigation and autonomous collision avoidance
- Fuel efficiency monitoring and analysis
- Vessel asset management
- Shore-based management

DIGITAL INTELLIGENT SYSTEM

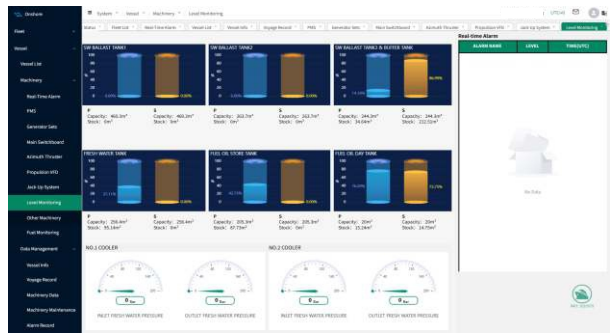
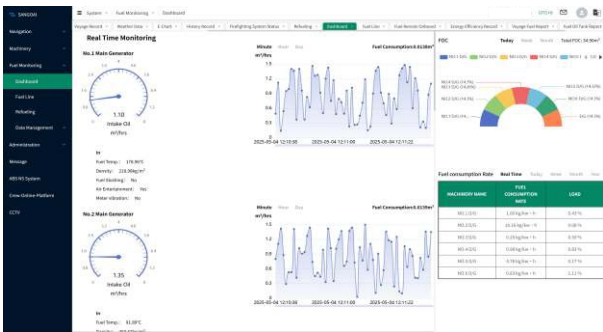


1. E-Chart

- Real-time fleet positioning and navigation status
- Speed, heading, latitude/longitude, draft dat
- Sea state information and geofencing monitoring
- Overview of onboard equipment and status

2. Fuel Monitoring

- Tracks each unit's fuel flow meter rate
- Real-time monitoring of fuel temperature, density, and sloshing
- Air ingress and flow meter vibration detectio
- Statistics of unit-level fuel consumptio

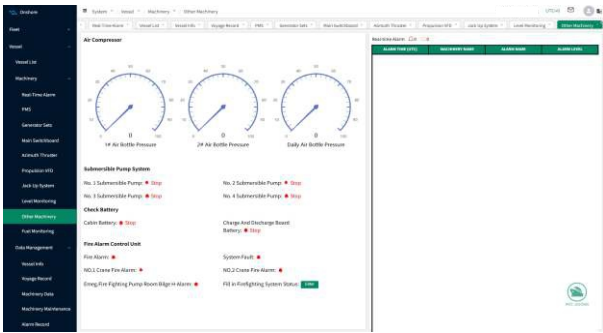


3. Tank Level Monitoring

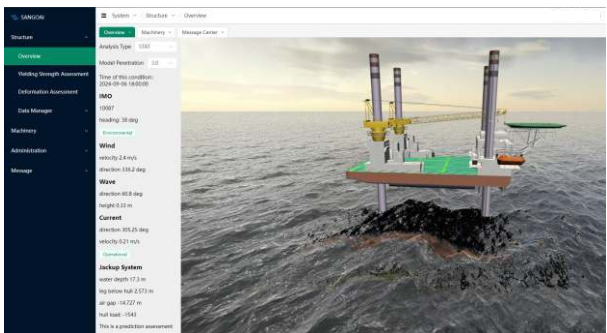
- Tracks all vessel tank levels and reserves
- Covers service tanks and fuel tanks
- Monitors auxiliary parameters such as cooling system pressure
- Provides real-time level alarms

4. Equipment Data

- Real-time data acquisition of onboard equipment
- Covers key machinery, navigation, and auxiliary equipment
- Provides operation and fault alarm
- Supports remote monitoring and analysi



SMART TRIDENT SYSTEM

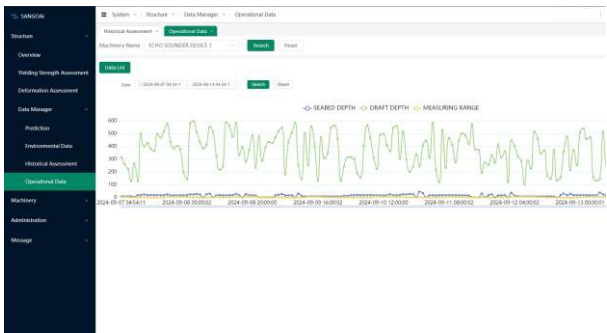
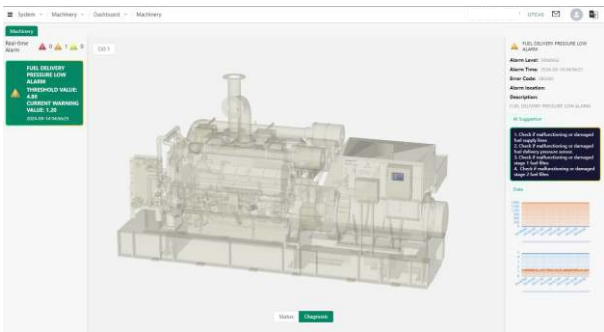


1. Structural Health Monitoring

- Real-time display of sea state and hull condition
- Intelligent evaluation of yield strength and deformation
- Stress assessment based on finite element analysis
- Provides visualized references for vessel safety

2. Machinery Health Monitoring

- AI-powered monitoring of machinery operations
- Early warnings on abnormal equipment with supporting data
- Fault visualization via 3D exploded diagrams
- Enables rapid problem localization and maintenance guidance

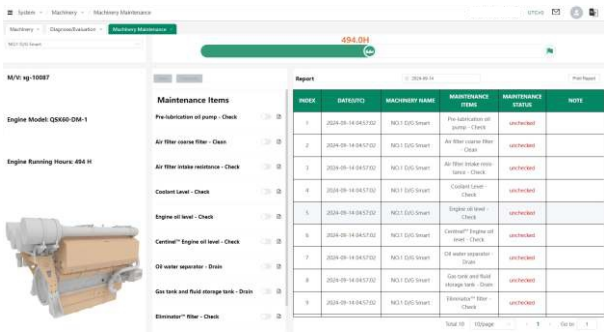


3. Data Management

- Collects diagnostic, predictive, and environmental data
- Records equipment operating status and key parameters
- Supports data queries and trend analysi
- Provides scientific basis for decision-making

4. Equipment Maintenance

- Provides standardized maintenance reminders and guidance
- Supports maintenance logs and tracking
- Improves efficiency and extends equipment lifespan
- Ensures safe and stable operation



ALARM MONITORING SYSTEM



1. Engine Monitoring

- Real-time collection of engine data and key parameters
- Mimic diagram visualization of complete engine state
- Monitoring temperature, current, pressure, RPM, etc.
- Supports abnormal alarms and status tracking

2. Engine Data

- Centralized display of fuel, cooling, lubrication oil data
- Clear visualization of operations and alarms
- Supports trend analysis and comparisons
- Provides a complete system overview



3. Propulsion System Monitoring

- Tracks main propeller and steering gear status
- Displays VFD, shaft lock, rudder angle, and propulsion load
- Real-time monitoring of key components and cooling systems
- Supports precise operations and fault prevention

4. PMS Power Management

- Manages ship's main power and generator status
- Monitors voltage, current, frequency, and load
- Supports remote start/stop and mode switching
- Visualized power system operations and alarms



CENTRAL MONITORING SYSTEM



1. Fleet Operations Dashboard

- Displays overall fleet operational status
- Integrates single-vessel monitoring, fuel data, and CCTV
- Provides KPI comparisons, alarms, and asset utilization rates
- Centralized maintenance data for decision-making

2. Fuel Management & Analysis

- Records daily fuel consumption and speed correlation
- Analyzes efficiency with sea and operating conditions
- Real-time bunkering and residual fuel records
- Trend analysis for operational optimization

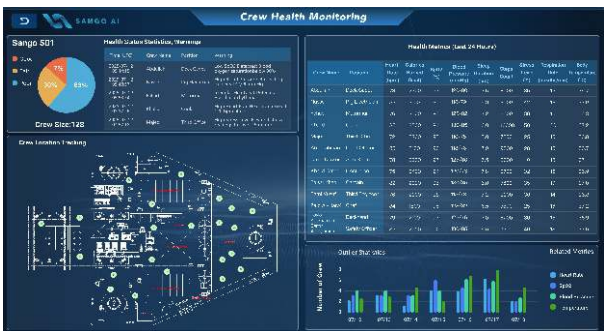


3. Alarm Monitoring & Statistics

- Aggregates alarms from key subsystems
- Provides daily/weekly reports and ratio analysis
- Displays detailed logs and historical records
- Enables quick fault identification and response

4. Crew Health Monitoring

- Tracks crew health indicators and provides alerts
- Real-time positioning and health data analysis
- Monitors anomalies and health trends
- Supports crew management and safety assurance



NEW ENERGY SYSTEM

Permanent Magnet Motors, Inverters, And Programmable Units



DC Distribution Panels



Propulsion Systems

EM-PMI Propulsion Motor
Max Power: 1.5 MW
EC-C Inverter
Max Power: 1.5 MW



AC Generator

EM-PMI Generator
Max Power: 1.5 MW
EC-C Inverter
Max Power: 1.5 MW



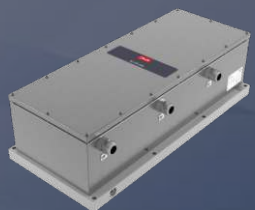
AC Distribution

EC-C Microgrid Inverter
with independent filter transformer



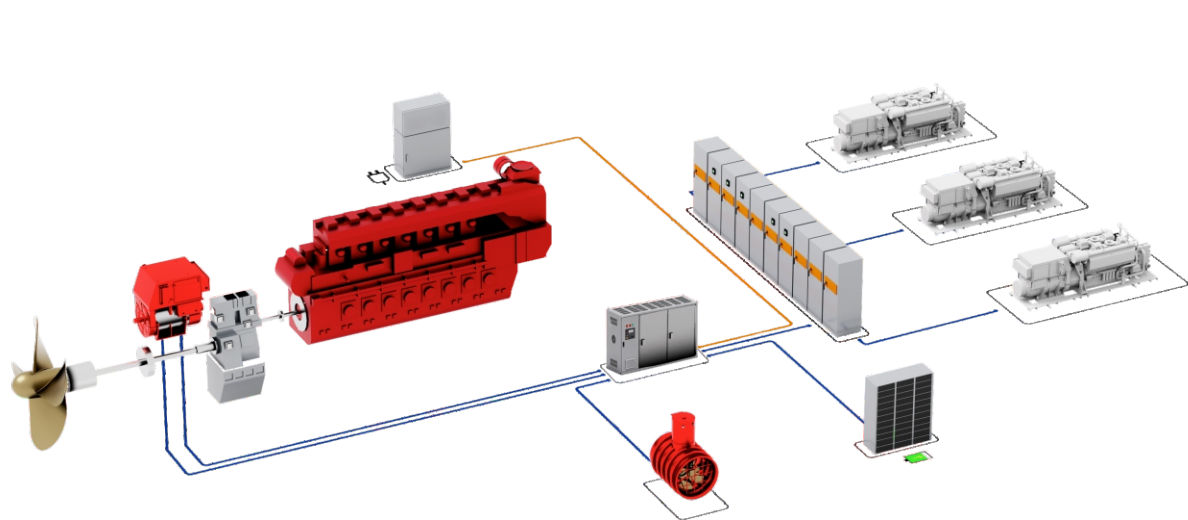
Power Supply

EC-C DC/DC Converter
EC-LTS Inductor Unit

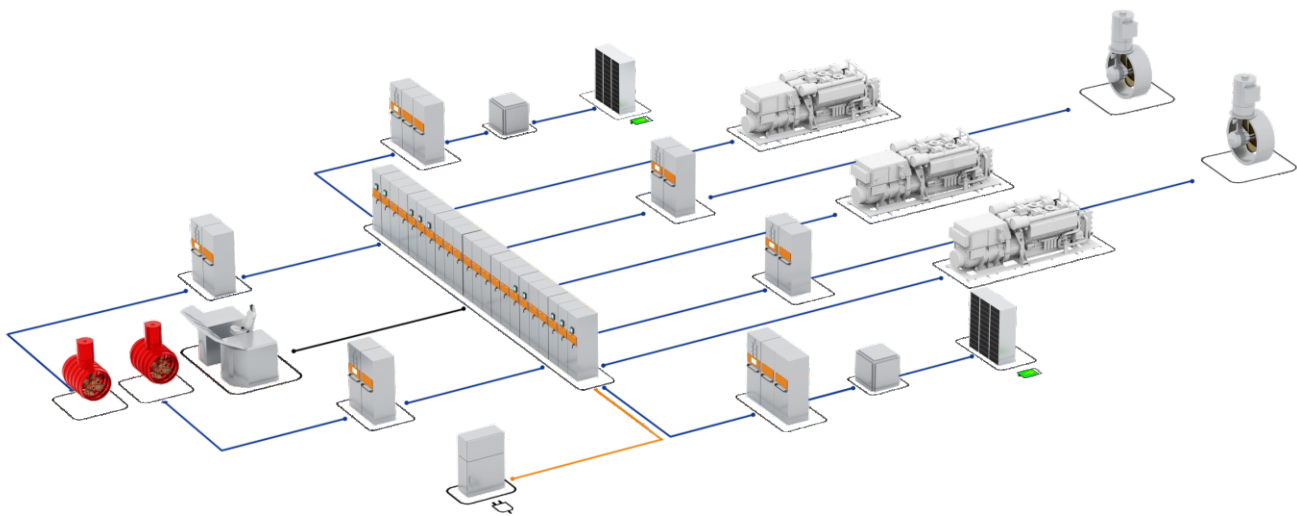


MARINE NEW ENERGY
PROPULSION SYSTEMS

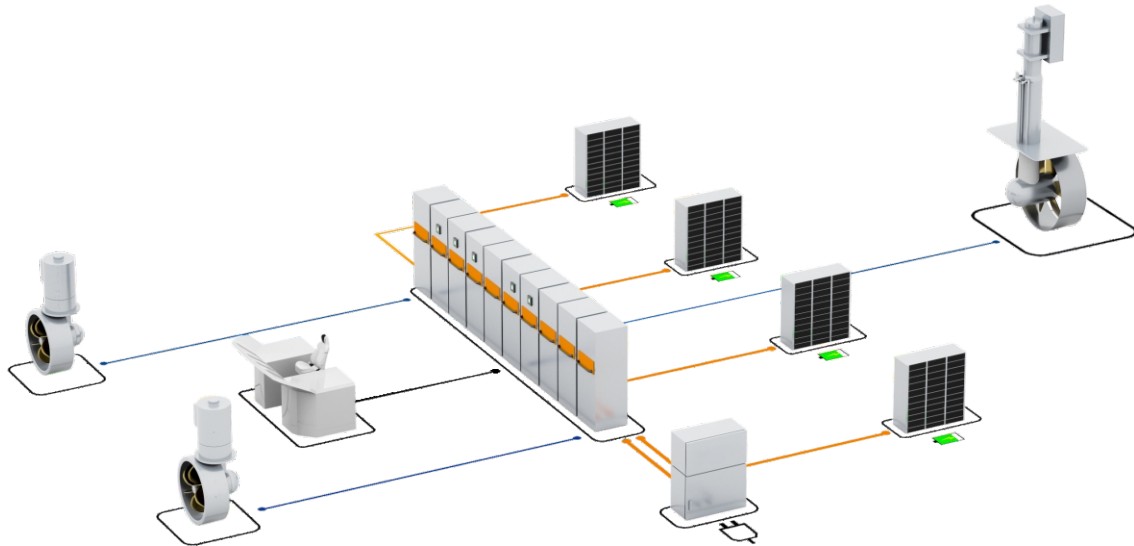
01
Diesel-electric, PTO/PTI & Hybrid Systems



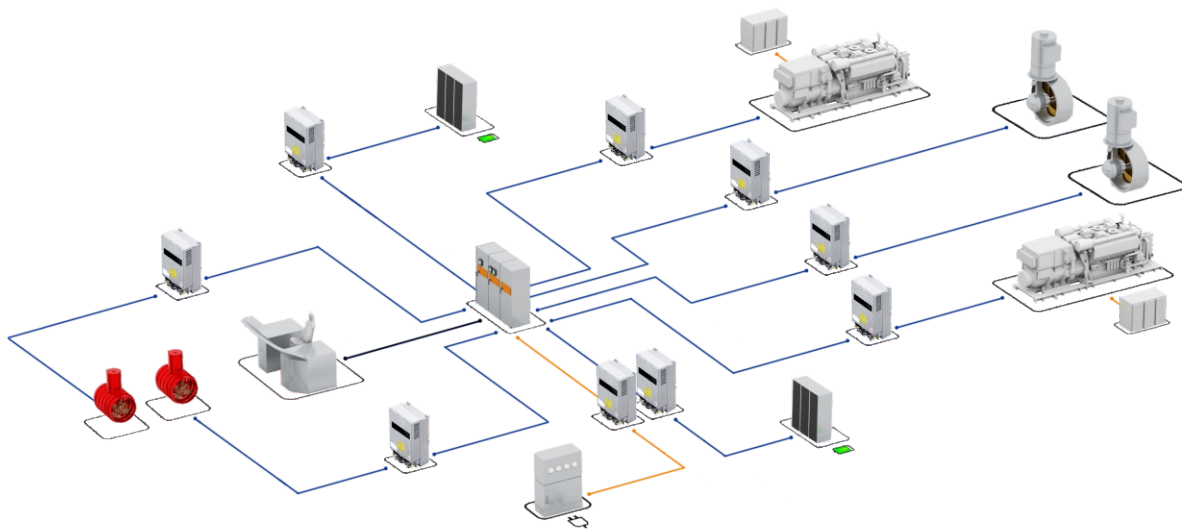
02
AC Hybrid Systems



03
Zero-emission Battery Propulsion Systems



04
DC Hybrid Power Systems



05

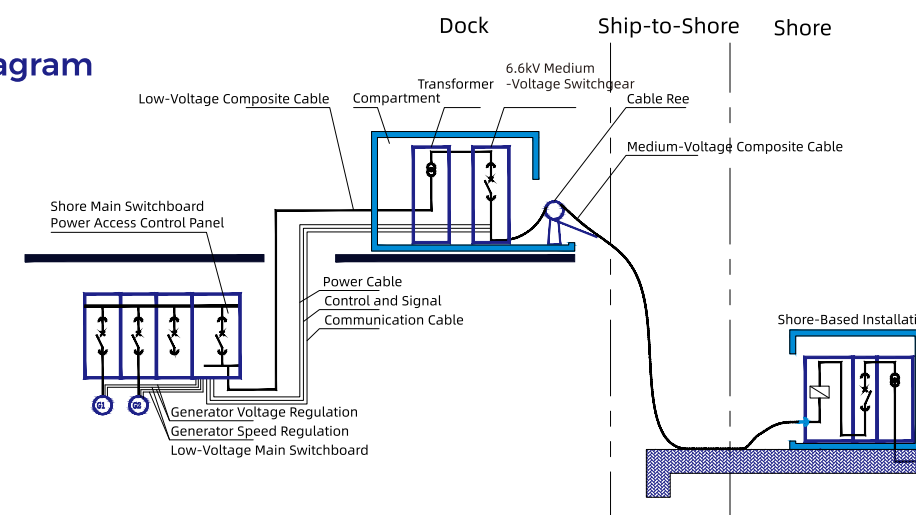
SHIP ELECTRICAL SYSTEM

High-voltage Shore Power, Energy Storage, Mv/lv Switchboards, Shaft Generator Systems, Electric Propulsion Systems

MV AND LV SHORE POWER SYSTEM

During port berthing, shore-based medium-voltage power supply effectively reduces emissions. The system complies with IEC/ISO/IEEE 8005 standards and can be installed as a standalone unit or deployed flexibly in a containerized design.

System Diagram

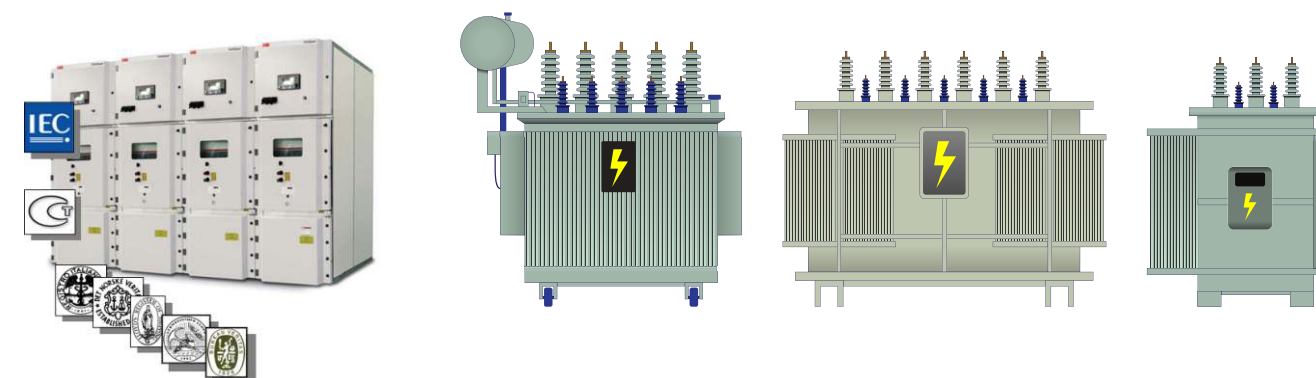


Specifications

Voltage: 6600V-12500V
Current: 630A-1250A
Power: 800KVA-7500KVA
Frequency: 50HZ/60HZ
Classification: CCS/ABS/BV/DNV*GL/LR/RINA



Product

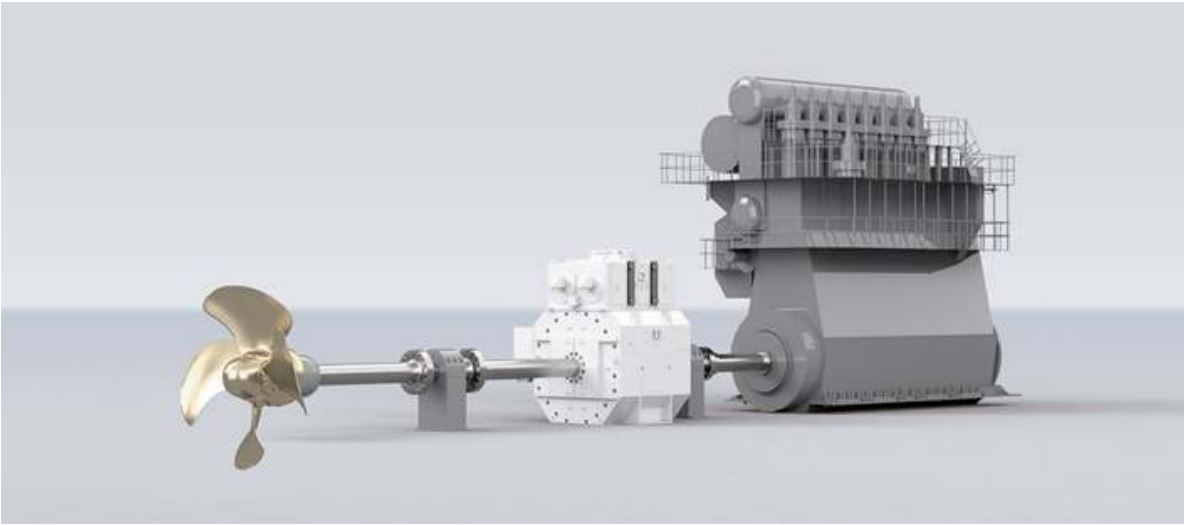


MT POWER

SHAFT GENERATOR VARIABLE FREQUENCY SYSTEM

Leveraging diesel engine power and variable frequency technology, the system delivers high-quality and stable power supply to cover the vessel's entire voyage. It features fuel saving, emission reduction, noise and energy consumption reduction, and extended equipment lifespan. The system also supports synchronization with the main generators, enabling intelligent load and power station management.

System Diagram



Specifications

Voltage: 690V
Power: 7MW
Frequency: 50HZ/60HZ
Classification: CCS/ABS/BV/
DNV*GL/LR/RINA

Product



Shaft-driven AC Generator



VFD (Brands: Danfoss, ABB)

ENERGY STORAGE SYSTEM ESS

1. Marine ESS Power Storage
2. Battery Voltage: DC 100-1000V
3. Rated Discharge: 0.5C
4. Capacity: 200-2000 kWh



DISTRIBUTION BOARD

ABB MNS 2.0 Distribution Switchboard
Fully Compliant with Global Standards:

- IEC (International Electrotechnical Commission)
- CCS (China Classification Society)
- VDE (German Institute for Electrical Technologies)
- And all other requirements from major classification societies.

Key Specifications:

- System: For AC 50-60Hz power systems
- Rated Voltage: Up to 690V
- Horizontal Busbar: Up to 6300 A
- Vertical Busbar: Up to 2000 A
- Construction: Modular frame with component grid based on E=25mm



INTEGRATED SOLUTIONS
FOR TANKERS

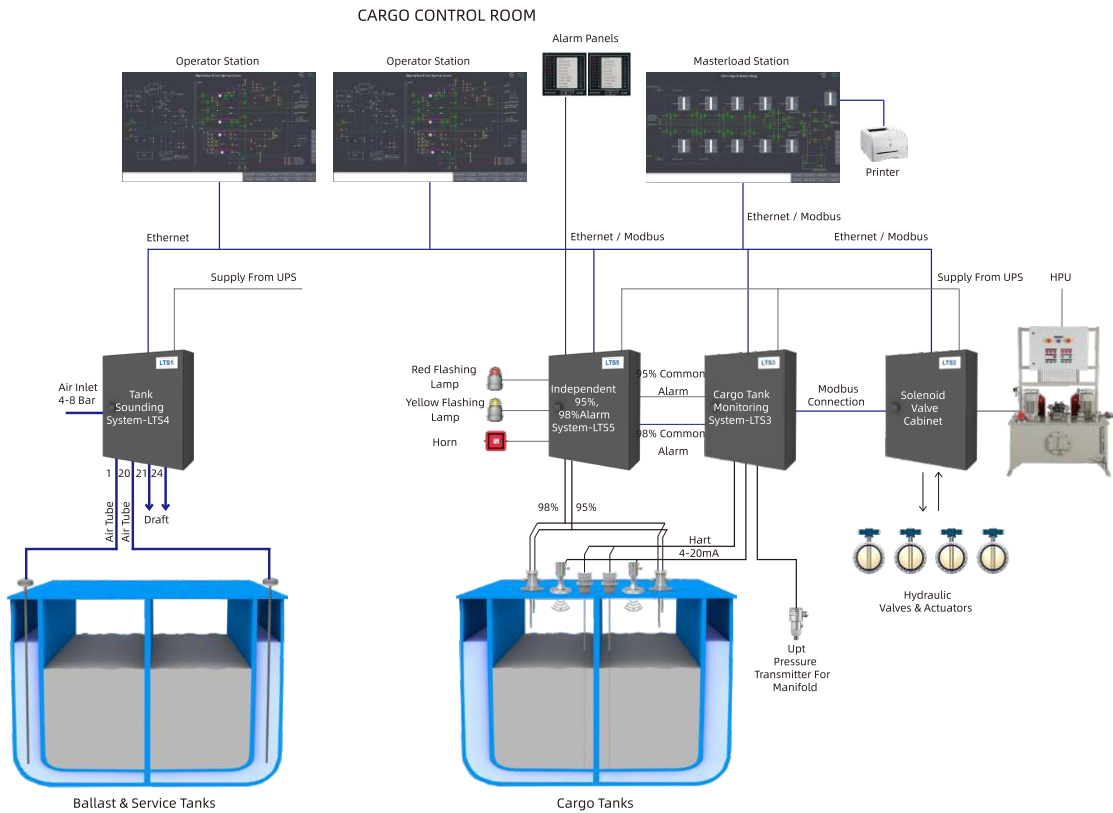
Integrated Automation System (IAS) is a unified hardware and software solution for ship operation, providing centralized remote control, monitoring, and alarm functions to ensure the safe and efficient operation of a vessel. Its modular design allows for customized solutions for various types of tankers. The system is independently developed and manufactured by API Marine and supports the integration of third-party equipment.

Main Functions:

- Cargo & ballast operations
 - Cargo tank level, temperature, pressure monitoring
 - Ballast/service tank sounding system
 - Cargo tank high-level /overflow alarms
 - Cargo & ballast pump control
 - Tank monitoring
- Valve monitoring
 - Online monitoring of load, stability, buoyancy
 - Manifold pressure & temperature monitoring
 - Service tank overflow detection
 - Draft, trim, list monitoring

Configuration:

- Cargo tank level gauging system
- High-level & overflow alarms
- Ballast/service tank level gauging
- Valve & remote control system
- Loading computer
- Sensors & transmitters



INTEGRATED SOLUTIONS FOR BULK
CARRIERS & CONTAINER VESSELS

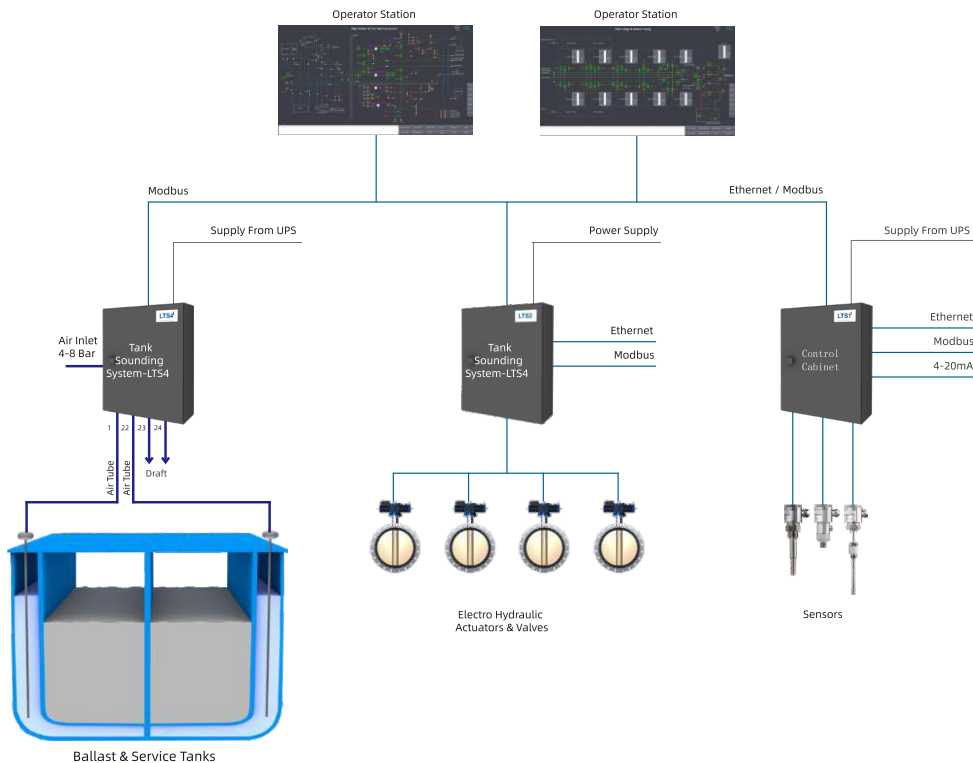
The IAS provides comprehensive tank monitoring and control management for bulk carriers and other commercial vessels. Its modular design supports customized applications, allowing for the monitoring and control of ballast tanks, service tanks, and critical equipment such as valves, pumps, and actuators. The system offers real-time display of parameters like liquid levels, pressure, temperature, draft, and trim/list, as well as alarm monitoring. The modern, user-friendly interface features adjustable layouts, and both the hardware and software are 100% independently developed by API Marine.

Main Functions:

- Valve & pump monitoring
- Engine room monitoring & alarms
- Ballast/service tank sounding systems
- High-level & overflow alarms
- Tank temperature alarms
- Draft, trim, list monitoring

Configuration:

- Ballast/service tank level gauging system
- Valve & remote control system
- Loading computer
- Sensors & transmitters



06

INTEGRATED MICROGRID SOLUTION



Generator Sets, Marine PV Systems, High-Safety Energy Storage, Smart Energy Management System

Generator Sets

Stable Core - High-performance marine diesel gensets ensuring fundamental vessel power
Precision Control - Integrated control system optimizing fuel efficiency
Safe & Reliable - Built for harsh marine environments, ensuring long-term reliability



PV Systems

Green Power - High-efficiency modular solar PV for marine applications
Auxiliary Boost - Reduces genset load, enhances fuel efficiency



Energy Storage Systems

Dynamic Balance - High-safety batteries smoothing power fluctuations
Energy Optimization - Peak shaving, backup supply, enhanced efficiency
Marine-grade Adaptability - Ruggedized for complex conditions



Smart Energy Management System (EMS)

Intelligent Core - Integrating generators, photovoltaics, energy storage, and onboard systems to enable unified scheduling.
Enhanced Efficiency - Real-time management and data analysis to boost energy utilization, enabling precise control.
Green Shipping - Supporting environmental compliance and promoting energy conservation, emission reduction, and sustainable operations.



SMART MARINE POWER SYSTEM INTEGRATOR

1,000-passenger Ferry

Shipyard: Sunbird Shipyard
Battery: 300 kWh
Class: BV
Main Genset: 4 × 830 ekW
Hybrid Propulsion: 4 × 500 ekW PM Motors
 4 × 830 ekW PM Generators



5,000 HP Hybrid Tugboat

Shipyard: Mawei Shipyard
Battery: 2000 kWh
Class: CCS
Hybrid Propulsion: 3 × QSK50-DM 1400 ekW



FPSO

Shipyard: CRUDC Shipyard
Emergency Genset: 1xQSK60-DM 1800ekw
Class: DNV
Main Genset: 4xQSK95-DM 2700ekw



LIFTBOAT

Shipyard: WMMP Shipyard
Emergency Genset: 1xKTA19-DM 350ekw
Class: ABS
Main Genset: 2xQSK60-DM 1800ekw
 4xK38-DM 825ekw



Pure Electric Yacht

Shipyard: Mazarin Shipyard
Battery: 200 kWh
Solar: 10 kW
Electric System: 2 × 50 ekW motors + drives



64m AHTS

Shipyard: Jingjiang Nanyang, Jiangmen Hangtong, SHIN YANG, PT USP
Emergency Genset: 1x6CT8.3-DM 99ekw
Class: ABS
Main Genset: 4xK50-DM 1350ekw

SMART MARINE POWER SYSTEM INTEGRATOR

63500 DWT Bulk Carrier

Shipyard: Nantong Xiangyu
Class: BV/LR/ABS
Scope of Supply:
Valve Remote Control
& Tank Level Gauging Systems



3500 m³ Dredger

Owner: Jan De Nul
Shipyard: Keppel Singmarine
Scope of Supply:
Generator sets, VFD, MSB,
AMS/PMS, frequency
converters

79900 DWT Bulk Carrier

Shipyard: Nantong Xiangyu
Class: CCS
Scope of Supply:
Valve Remote Control
& Tank Level Gauging Systems



1200T Wind Turbine Installation Vessel

Shipowner: Zhen Da
Shipyard: WMMP
Scope of supply: Genset

33000 DWT Chemical Tanker

Shipyard: Nantong Xiangyu
Class: BV
Scope of Supply:
Valve Remote Control
& Tank Level Gauging Systems



97.8M DSV

Shipowner: Jana Marine
Shipyard: Guangzhou Salvage Bureau
Scope of supply:
Genset, AC Hybrid System,
DIGITALIZATION(Aramco
Spec), SMART, CYBER
SECURITY, Crew Behavior

PARTNERS

