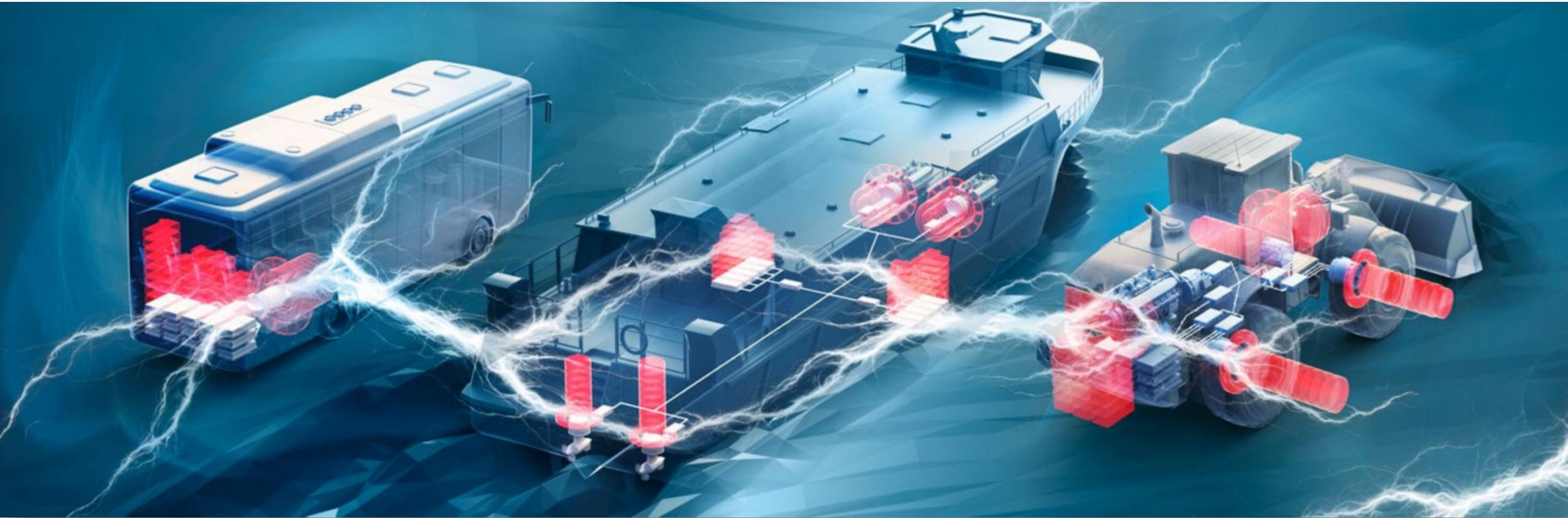


MT Power



Smart Marine Power System Integrator



01 MT Group History



Sales Revenue: USD 140M
Employees: 300+



- Factory Opening : 2021
- workshop 17900m², including:
 1. power workshop
 2. valve ctrl & automation workshop
 3. new energy solution R&D Lab.
- smart monitoring workshop
- warehouse 2900m²
- Test Bay: 9 , total power: 15000kw
- Prod. certified :CCS, ABS, DNV/GL, BV, LR, KR, Rina, and other classification societies in the world
- Prod. Capacity : 800 gensets / year
- Delivered: 6000+ genset by now



Cummins Genset:

Engine Model: 6B,6C,6L, QSB7,QSM11,
K19,K38,K50,QSK50,QSK60,QSK95

Power Range: 40 KW ~ 3000 KW



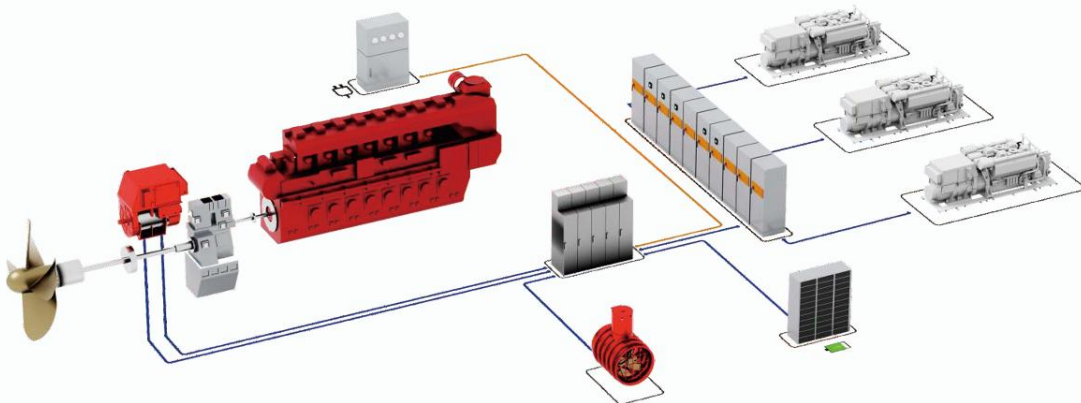
Zone 2 Genset:

Engine Model:

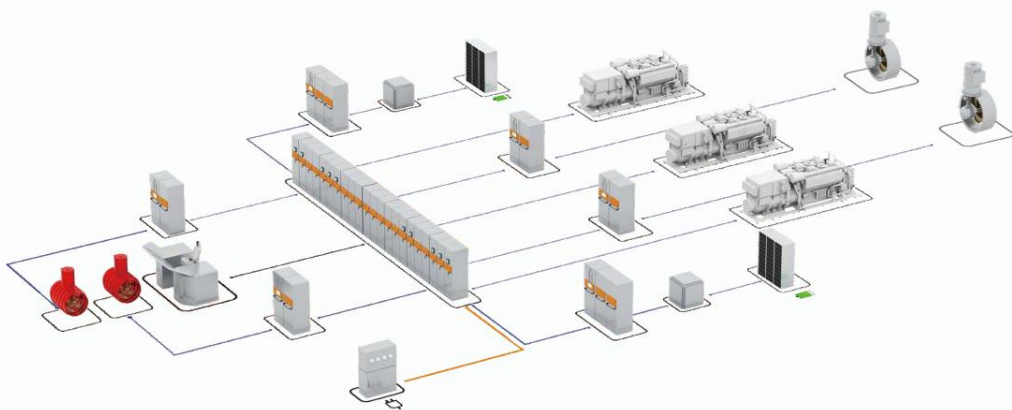
K19,K38,K50,QSK50,QSK60

Power Range: 200 KW ~ 2000 KW

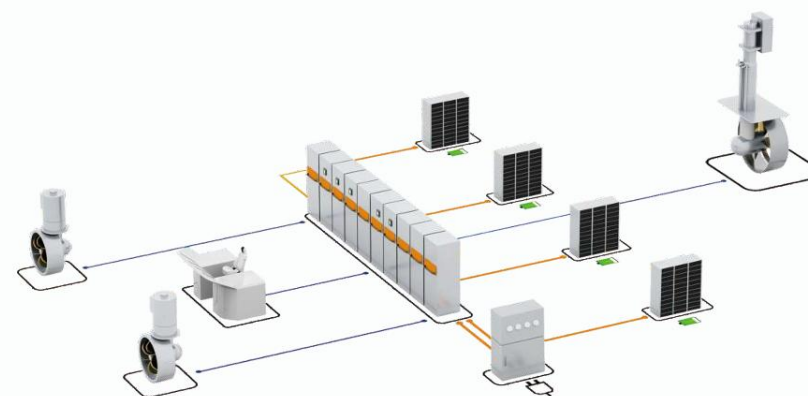
01 Diesel-electric, PTO/PTI & Hybrid Systems



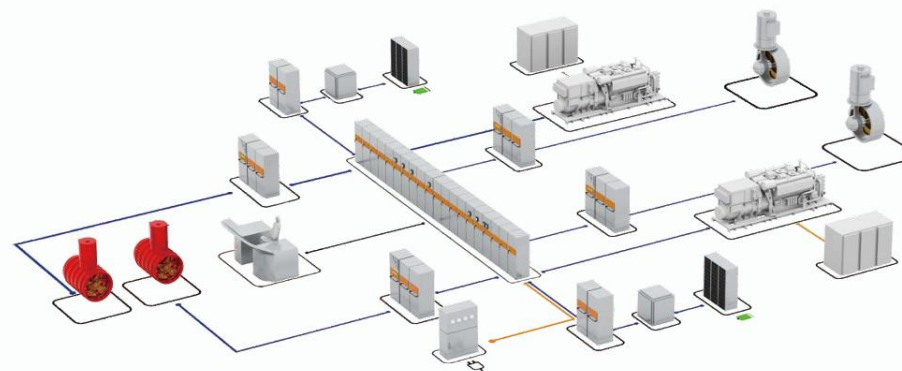
02 AC Hybrid Systems

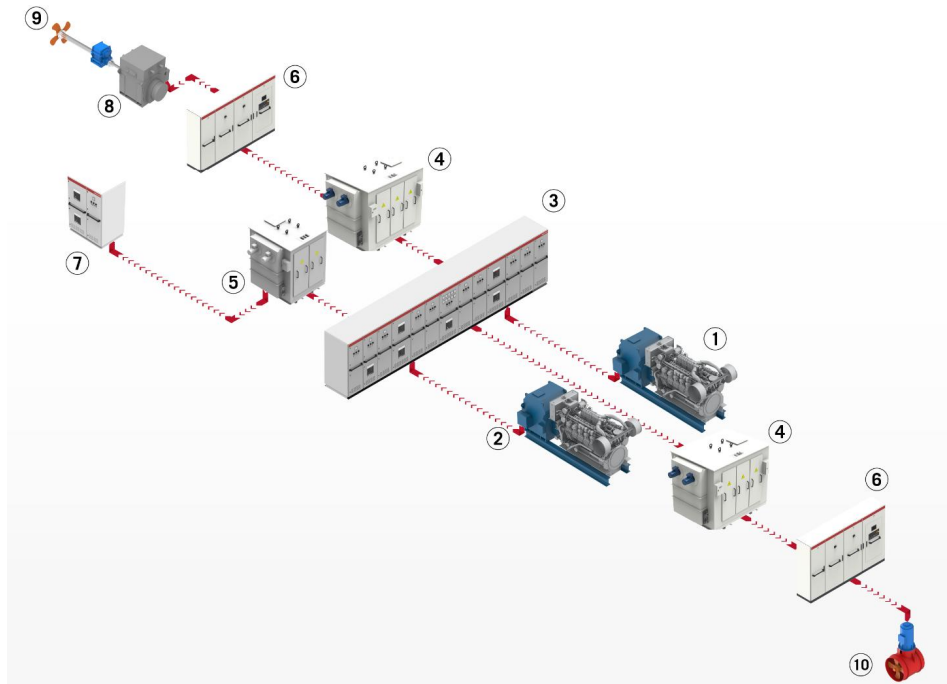


03 Zero-emission Battery Propulsion Systems



04 DC Hybrid Power Systems





Diesel Electrical Propulsion system



690V Main Switchboard with ABB Breaker

AC690V&DC 1000V Electrical System:

- ABB Motor
- ABB Switchboard
- ABB Driver
- Power Management system
- EVE or CATL Battery



Energy Storage System

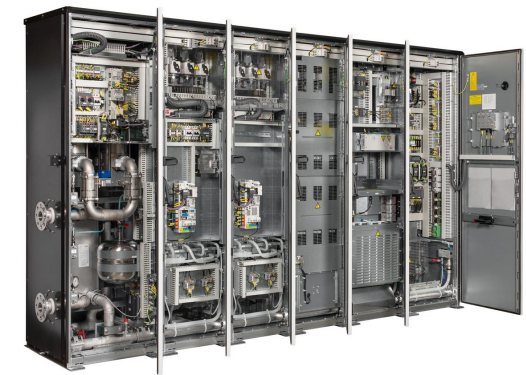
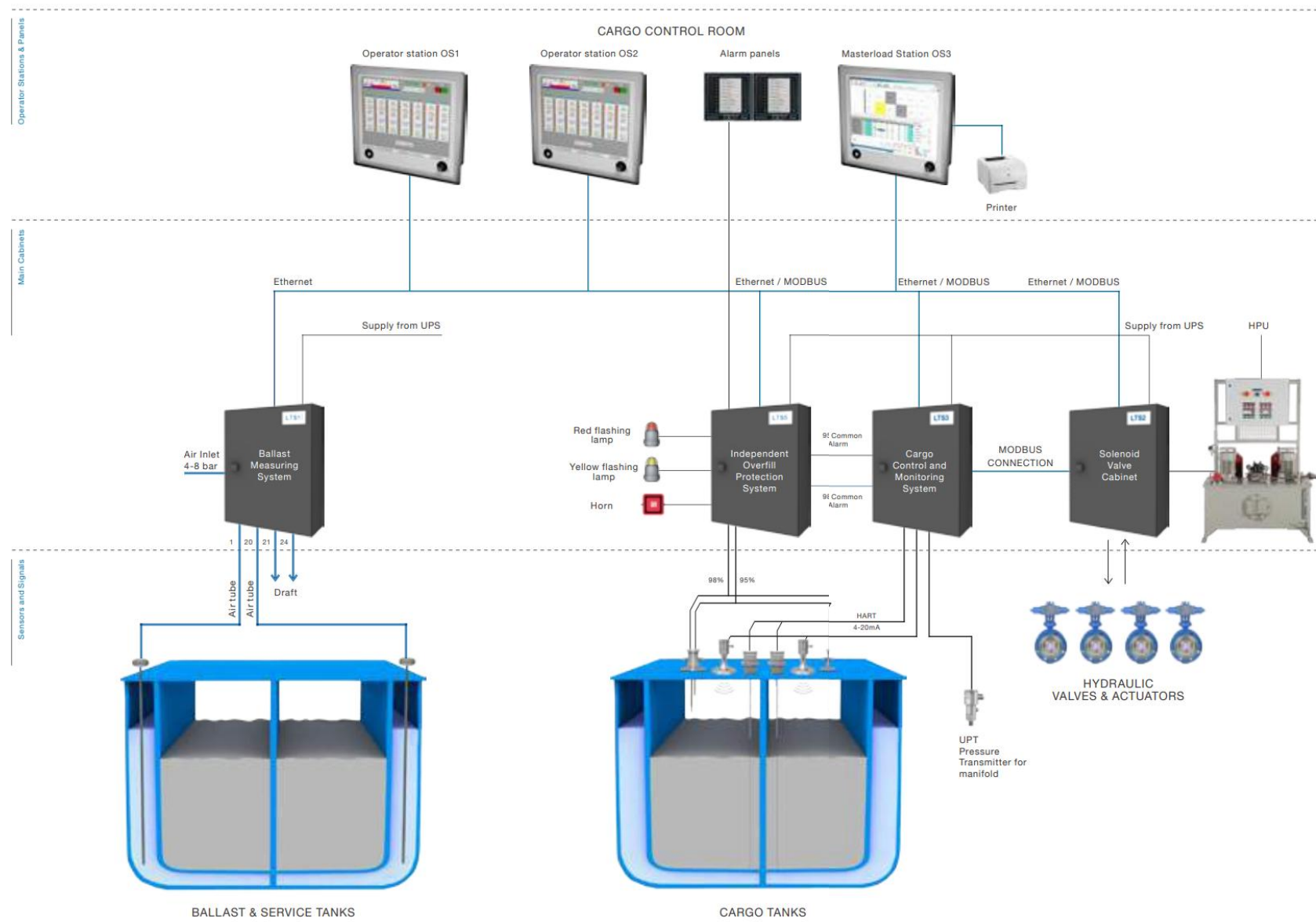


ABB ACS880 Driver



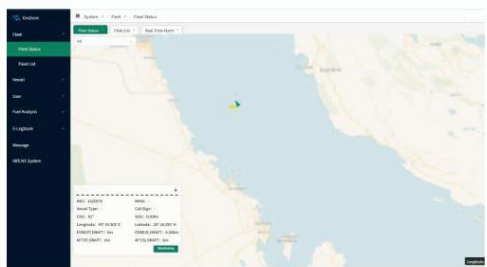
ABB AMI Motor

Marine Tank Management



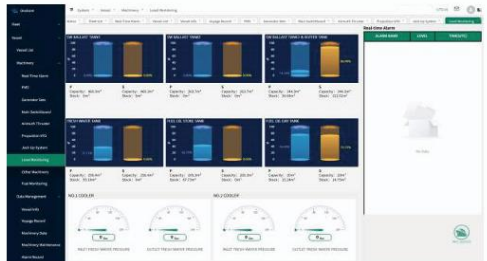


DIGITAL INTELLIGENT SYSTEM



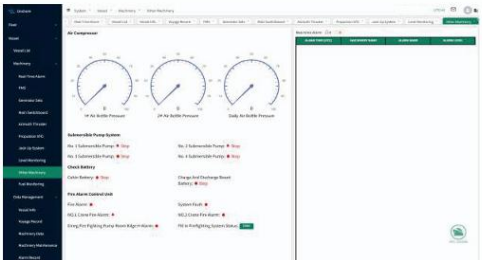
- 1. E-Chart**
- Real-time fleet positioning and navigation status
 - Speed, heading, latitude/longitude, draft data
 - Sea state information and geofencing monitoring
 - Overview of onboard equipment and status

- 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 detection
 - Statistics of unit-level fuel consumption

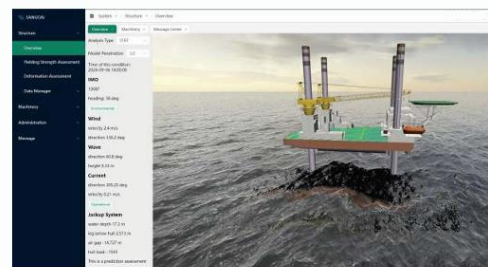


- 3. Tank Level Monitoring**
- Tracks all vessel tank levels and reserves
 - Covers service tanks and fuel tanks
 - Monitors auxiliary parameters such as cooling system pressure
 - Provides real-time level alarms

- 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 analysis

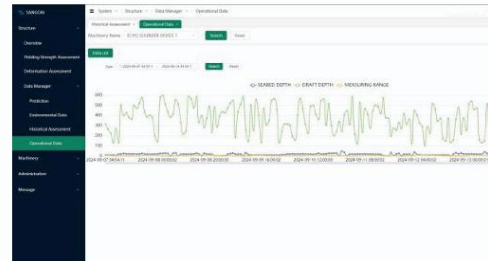


SMART TRIDENT SYSTEM



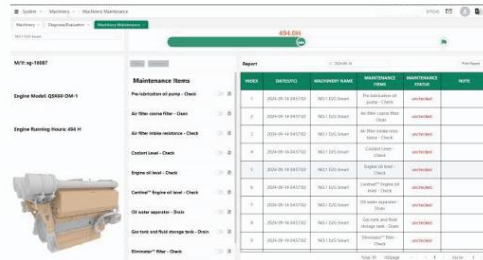
- 1. Structural Health Monitoring**
- Real-time display of sea state and hull condition
 - Intelligent evaluation of yield strength and deformation
 - Stress assessment based on finite element analysis
 - Provides visualized references for vessel safety

- 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 analysis
 - 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



Valve Ctrl & Automation System AMS/PMS/PCS



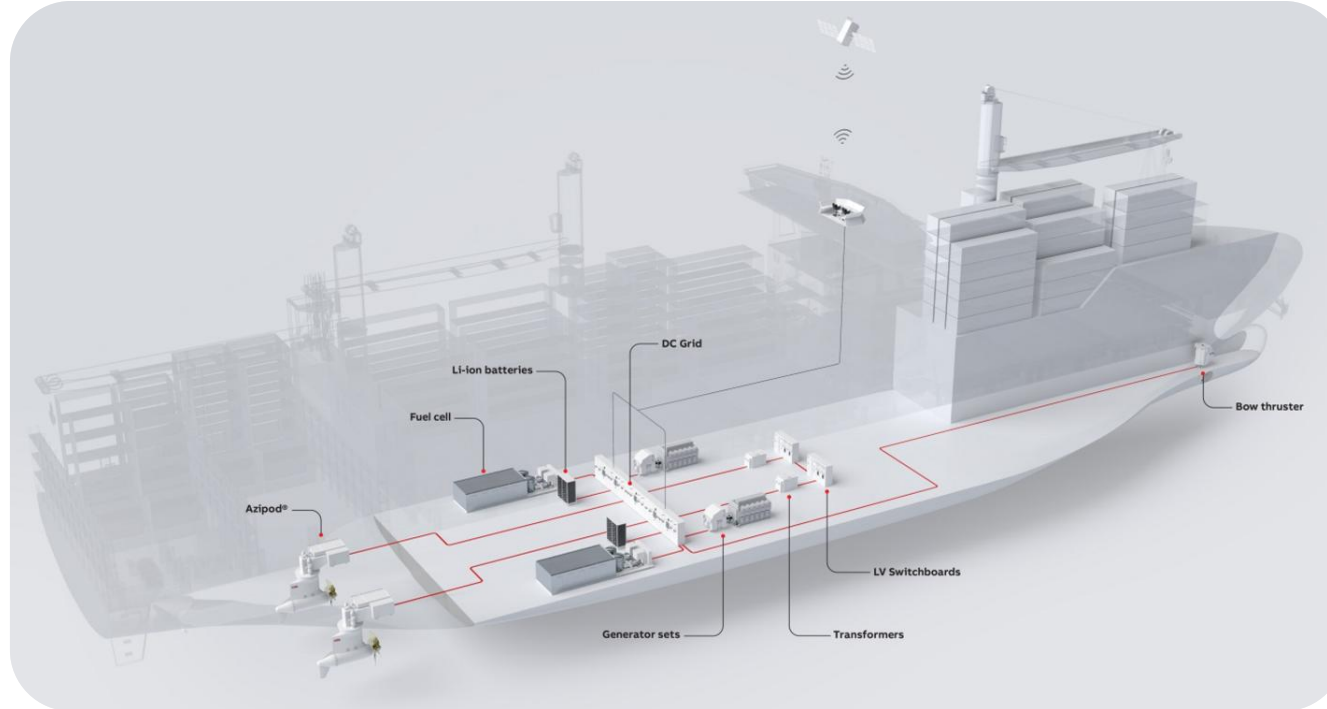
DE / Hybrid System



Danfoss Driver
/ PM Motor



ABB Driver
/Motor



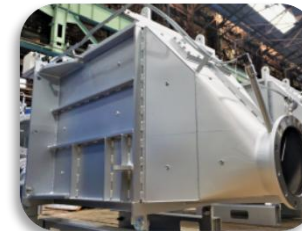
Power System



DPF



Cummins Engine & Genset



SCR

SMART Vessel System



Smart INF, MHM, SHM
Digitalization
Digital Twin
Cyber Security



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Wuhan, Guangzhou,
Shenzhen, Shanghai,
HongKong

zhouyixu@mt-power.com.cn

06 Reference(selected)

Ship Owner: Jana Marin (Saudi)

Shipyard: Guangzhou Salvage

Delivery: 1 vessels

Class: ABS

97.8M Hybrid SAT DSV

Scope of Supply:

- **Main Gen:** 7 x 1800ekw Genset
- **DE system:** ABB Switchboard + VFD + Propulsion Motor
- **Battery:** 1800KWH
- **SMART System:** INF, MHM Tier 2, SHM Tier2
- **Digital (VFMS)**
- **Cyber**



06 Reference(selected)

Ship Owner: Octagen (Middle East)

Shipyard: Aulong Shipyard

Delivery: 1 vessels

Class: BV

80M DC Hybrid MAV(118men)

Scope of Supply:

- **Main Gen:** 4 x 1600ekw Genset
- **DE system:** ABB Switchboard + VFD + Propulsion Motor + AMS/PEMS/RCS
- **Battery:** 2000KWH
- **SMART System:** Data Infra, MH2, H2
- **Digital (VFMS)**
- **Cyber**



06 Reference(selected)

Ship Owner: Jana Marin (Saudi)

Shipyard: WMMP shipyard

Delivery: 9 vessels

Class: ABS

350Ft Jack up Barge (Type B, C, D)

Scope of Supply:

- **Main Gen:** 6 x 1300ekw Genset
- **DE system:** ABB Switchboard + AMS/PMS + VFD + Propulsion Motor + Azimuth Control System
- **SMART System:** INF, MHM Tier 2, SHM Tier2
- **Digital**



06 Reference(selected)



- **Project:** FPSO Agogo
- **Shipowner:** Yinson Offshore
- **Shipyard:** Huarun Dadong Shipyard
- **Main Gen:** 4 X QSK95-DM 2700ekw
- **Emergency:** 1 x QSK60-DM 1800ekw
- **Classification societies:** DNV
- **Delivery:** 1 ship/set

- **Project:** 65M DE 80T AHTS
- **Shipowner:** Rawabi Vallianz
- **Shipyard:** Hangtong, PT USP, Shin Yang, SOE
- **Main Gen:** 44 X QSK50-DM 1600ekw
- **Emergency Gen:** 11 x KTA19-DM 400ekw
- **Classification societies:** ABS
- **Delivery:** 11 ship/set



06 Reference(selected)



- **Project:** 5000HP Hybrid Tugboat
- **Shipowner:** Xiamen Port Authority
- **Shipyard:** Mawei Shipyard
- **Main Gen:** 3 X QSK50-DM 1400ekw
- **Battery:** 2000 kwh
- **Classification societies:** CCS
- **Delivery:** 1 ship/set



- **Project:** 1200T Wind Farm Installtion
- **Shipowner:** Hua Xia Leasing
- **Shipyard:** Dajin Shipyard
- **Main Gen:** 6 X QSK60-DM 1600ekw
- **Classification societies:** CCS C2
- **Delivery:** 2 ship/set

06 Reference(selected)



- **Project:** 120T AHTS
- **Shipowner:** Rawabi Vallianz
- **Shipyard:** Nanyang, Hangtong, PT USP,
- **Main Gen:** 21 X CCEC QSK19-DM 550ekw
- **Emergency& Harbor Gen:** 7 x QSB7-DM 90ekw
- **Classification societies:** ABS
- **Delivery:** 7 ship/set

- **Project:** 60T DE Shallow Draft AHTS
- **Shipowner:** Rawabi Vallianz
- **Shipyard:** JOC and Hangtong shipyard
- **Main Gen:** 40 X CCEC K50-DM 1350ekw
- **Emergency Gen:** 10 x 6CT8.3-DM 99ekw
- **Classification societies:** ABS
- **Delivery:** 10 ship/set



Reference(selected)



- **Project:** 1000 Pax hybrid Ferry
- **Shipyard:** Plenty shipyard
- **Main Gen:** 10 X 830 ekw WITH IMO Tier3
- **Hybrid system:** DC-Link
- 10 x 500 ekw Permanent magnet motor
- 10 x 830 ekw Permanent magnet generator
- **Battery:** 300 kwh
- **Classification societies:** BV
- **Delivery:** 2 ship/set

- **Project:** 55ft Battery Yacht
- **Shipyard:** Mazarin shipyard
- **Battery:** 200 kwh
- **Solar:** 10 kw
- **Electrical System:** 2 x 150 ekw Motor + Driver
- **Genset:** 70 ekw Variable genset
- **Delivery:** 1+2 ship/set



A new round of offshore cycle began from 2022 to now:

- 10 X 64M 60T DE AHTS, Rawabi Vallianz
- 2 X 90M SAV , Rawabi Vallianz
- 2 X 50M Utility , Rawabi Vallianz
- 1 X 48M FCB , Rawabi Vallianz
- 7 X 120T AHTS , Rawabi Vallianz
- 11 X 65M 80T DE AHTS , Rawabi Vallianz
- 12 X Liftboat (Type 3), HEA
- 9 X Liftboat (Type B,C,D), Jana marine
- 1 X Liftboat, Dajin
- 10 X 69.8M Hybrid OCV , HEA
- 1 X 80M MAV, Milaha
- 2 X 65M ETV, Milaha
- 1 X 86M DE PSV, China Owner
- 4 X 42M FCB, Namcheong
- 5 X 64.8M DE 60T AHTS, Namcheong
- 2 X 55M DE AHT, Lanpan
- 1 X 97.8M SAT DSV, Jana Marine
- 8 X 91M MPSV, Costamare
- 3 X 75M PSV, Milaha
- 2 X 65M 90T DE AHTS, Ocean Kapital
- 2 X 65M 90T DE AHTS, Namcheong
- 2 X 65M OCV, POET
- 2 X 250T OCV, Oden Logistik
- 1 X 80M MAV, Octagen (JANA)
- 1 X 69.8M OCV, Boskalis
- 1 X 90M SAV, Keyfiled
- 2 X 65M AHTS, Jasa Marine
- 2 X 75M MAV, Allianz Marine
- 4 X 65M 90T DE AHTS, China Owner
- 2 X 66.9M 90T DE AHTS, Seacon(Nordic)
- 2 X 45M Hybrid FCB, M&L Group
- 2 X 49M AHT, Ragnar Energy
- 2 X 60M Workboat, Jana Marine

TOTAL: 121 Vessels





MT POWER

Thank You