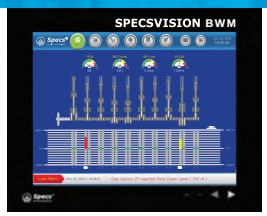
Marine Safety, Instrumentation and Control System


COMD


AOMD



BWM

SPM


TPM


BWMS

Products for Marine Industry

Oil Mist Detection System for engine room (AOMD)
Oil Msit Detection System for diesel engine (COMD)
Bearing Wear Monitoring System (BWM)
Ship Performance Monitoring system (SPM)
Shaft Torque Power RPM Meter (TPM)
Float Level Gauging System (FLG)
Level Temperature Density Gauging System (LTD)
Power Transmission System
UV Sterilizer, Actuator, On-off Valve
Gaskets, Sealing Materials
Ballast Water Management System (BWMS)

Introduction

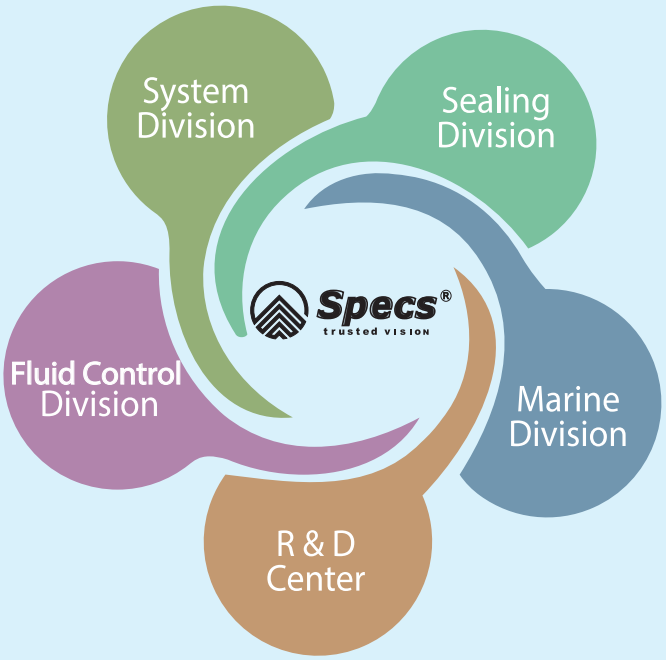
Since the foundation of the company in 1970, SPECS Corporation has put its highest priority of concern on meeting the diverse and difficult needs of its clients and becoming an innovative leader in the technologies that the company is pursuing.

SPECS is now one of the undisputed leaders in its area of expertises, which to provides products and services for safety, instrumentation and control systems required by marine and related industries.

During the last decades of its history, marine industry has acknowledged Oil Mist Detector (OMD) system as an important measurement to reduce the risk of fire from machinery space flammable oil systems or explosions induced by oil mist inside diesel engine crank case.
Though SPECS is one of the latest participants in this market, its oil mist detector for engine room (AOMD) and the one for inside crankcase (COMD) have already obtained reputation of being the top quality products throughout global clients.
For those SPECS AOMD and COMD, type approvals by major classification societies of the world have been granted.

Bearing wear monitoring system(BWM) is another result of SPECS' continuous efforts to respond to the needs of its clients. SPECS' BWM system can check the wear conditions of bearing in ship engine by real time monitoring.

Included above OMD, BWM system, SPECS supplies ship's monitoring systems which are SPM(Ship Performance Monitoring System), TPM (Shaft Torque Power RPM Meter). This system can monitor, check and help to maintain better performance for ship's energy saving.
SPECS provides the systems and services including installation, commissioning and repair.



Other than above products for marine industry, SPECS also manufactures and supplies products such as LTD System in LNG Terminals and FSRU, FLG in LNG carriers, gaskets of different designs, UV sterilizing systems, actuators, on-off valves and mechanical power transmissions to various industries.

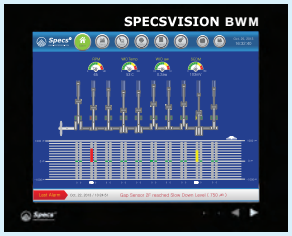
Major Products

AOMD

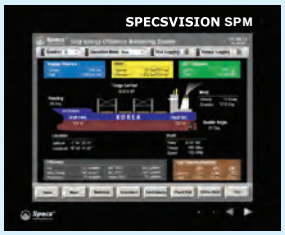
COMD

OMM

TPM



BWM



SPM

LTD

Major Customers

HYUNDAI HEAVY INDUSTRIES CO.,LTD. · SAMSUNG · DSME · HYUNDAI MIPO DOCKYARD · HYUNDAI SAMHO · stx Offshore & Shipbuilding · HHIC · SPP · DAE SUN

SUNGDONG · KITANIHON SHIPBUILDING · Hitz · MITSUBISHI HEAVY INDUSTRIES, LTD. · MAN · WÄRTSILÄ · CATERPILLAR · DOOSAN Doosan Engine · stx Heavy Industries

Kawasaki · IMEX · MES · AKASAKA · HANJIN · KLC · SK · HMM · stx Pan Ocean

KMTC · SAMHO SHIPPING · SHINSUNG · bp · MAERSK LINE · Stolt-Nielsen · MOL · NOL

대한민국해군

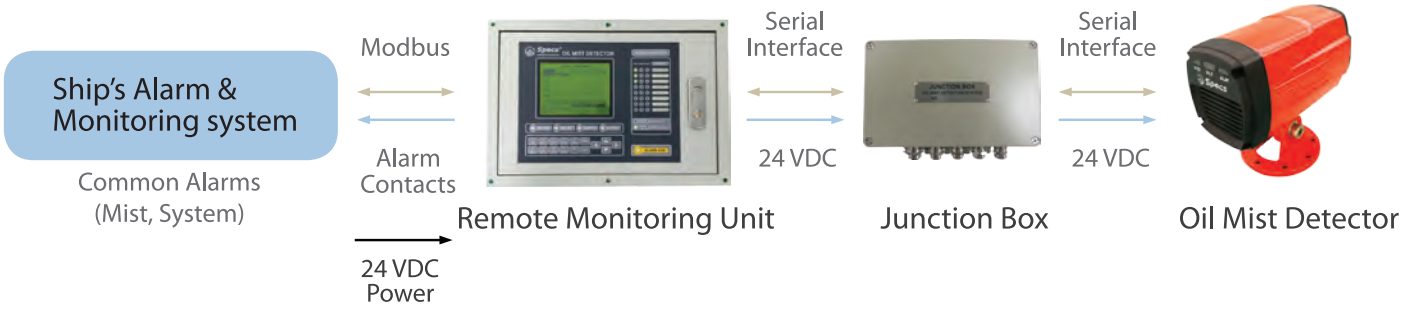
KOGAS · posco · KEPCO · GS · DAELIM · Hanwha · DAEWOO E&C · SAMSUNG · the better way of life LOTTE

GDF SUEZ · LG · KARI · SK hynix · QATARGAS · RasGas · ГАЗПРОМ

SPECSVISION-IIIA

Engine Room Oil Mist Detection System

Configuration



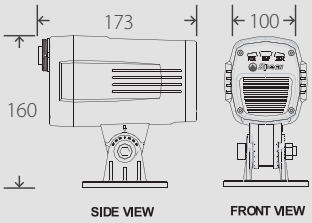
SYSTEM FEATURES

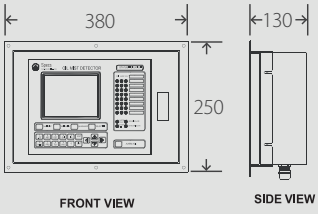
- Newest version based on recent IACS effectiveness verified based on M67 rules
- Superior accuracy verified
- Most rigid assembly
- Instantaneous response to alarm
- RS-485 / 422 to Ship's alarm monitoring system
- Less contaminated sensor design
- Highly integrated single board design
- Robust anti-vibration assembly
- Multi- functional remote monitoring unit
- Proven test and calibration chamber
- MIL STD-167, MIL-S-901D
- Access OMD system from anywhere around the world securely

SPECSVISION-ⅢA

Engine Room Oil Mist Detection System

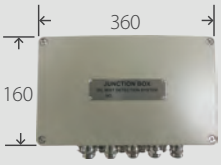
TECHNICAL SPECIFICATIONS





Oil Mist Detector

Type	VISION ⅢA Multi Sensor
Sensitivity	0.01 mg/ℓ
Communication Between RMU & Detector	RS-485 or 4~20 mA at range of 0~5.0 mg/ℓ
Indication	Green : Power ON Yellow : System Fault Red : Mist Alarm
5- Way Plug in Connector or Cable gland	Power : 1, 2 pin Signal : 3, 4 pin Shield : 5 pin
Mounting	Standard Stand or Bracket
Enclosure Rating	IP 44
Power	24 VDC
Temp. Rating(Operation)	0°C to 70°C
Dimensions	H 160 x W 100 x D 173 mm
Weight	1.4 kg
Housing	PPA +GF 30%, Halogen free, Aluminum Body



Junction Box

Type	VISION ⅢJA
Max. No. of Detector Input	14, Individual Connection
Enclosure Rating	IP 56
Temp. Rating	0°C to 70°C
Dimensions	H 160 x W 360 x D 90 mm
Weight	3.5 kg
Housing	Aluminum

Remote Monitoring Unit (RMU)

Type	VISION ⅢR
Display	6" Monochrome LCD(340 x 240) Mist-Level Display Mode (Bar & Digital Value)
Scanning Time	50 msec for each point
Max. No. of Group	8 Groups (14pts per group)
Max. No. of Detector	112 points
Measuring Range	0~5.00 mg/ℓ
Communication Signal Output	RS-485(protocol : MODBUS Dual)
Memory	
Event log	3000 Data
History log	Every 10 sec, up to 12 hrs
Alarm & Failure Status Mist Alarm	
Mist high alarm	RMU- Red LED ON(Alarm Indicator Panel)
Pre-warning alarm	Alarm Channel Displayed on LCD
System fault alarm	RMU-Yellow LED ON (Fan / Communication Alarm Indicator Panel)
Alarm Setting	Mist High Alarm(Max. 2.5 mg/ℓ) Pre-warning alarm : User adjustable
Alarm Contacts	Mist High : N.O(8 ea) Pre-warning alarm : N.C(8 ea) N.O/N.C selectable 125 VAC 0.5 A, 30 VDC 1.0 A, 1a1b
Enclosure Rating	IP 44
Power	24 VDC
Current rating	1.5 A
Over voltage protection	+30% -20% of voltage rating(24 VDC)
Temp. Rating	0°C to 70°C
Dimensions	
Wall Mounting	H 250 x W 380 x D 130 mm
Flush Mounting	H 290 x W 420 x D 130 mm
Weight	7.5 kg
Housing	Carbon Steel

Specs® trusted VISION

SPECSVISION-IIIC

Diesel Engine Crank Case Oil Mist Detection System

Configuration

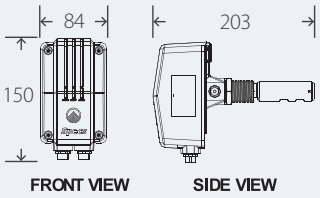
SYSTEM FEATURES

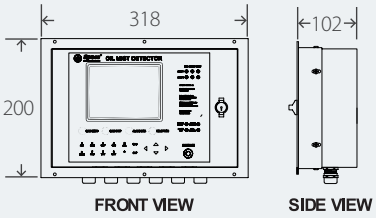
- Newest version based on recent IACS effectiveness verified based on M67 rules
- Superior accuracy verified
- Most rigid assembly
- Instantaneous response to alarm
- RS-485 / 422 to Ship's alarm monitoring system
- Less contaminated sensor design
- Highly integrated single board design
- Robust anti-vibration assembly
- Multi- functional remote monitoring unit
- Proven test and calibration chamber
- Access OMD system from anywhere around the world securely

SPECSVISION-ⅢC

Diesel Engine Crank Case Oil Mist Detection System

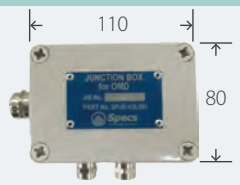
TECHNICAL SPECIFICATIONS





Oil Mist Detector

Type	VISION ⅢC
Sensitivity	0.01 mg/ℓ
Communication Between RMU & Detector	RS-485
Indication	Green : Power ON Yellow : System Fault Red : Mist Alarm
5-Way Plug in Connector	Power : 1, 2 pin Signal : 3, 4 pin Shield : 5 pin
Mounting	3/4" PF
Enclosure Rating	IP 56
Power	24 VDC
Temp. Rating(Operation)	0°C to 70°C
Dimensions	H 150 x W 84 x D 203 mm
Weight	0.6 kg
Housing	PPA +GF 30%, Halogen free



Junction Box

Type	VISION ⅢJC
Max. No. of Detector Input	14 Loop Connection
Enclosure Rating	IP 56
Temp. Rating	0°C to 70°C
Dimensions	H 80 x W 110 x D 70 mm
Weight	0.35 kg
Housing	PC + ABS

Remote Monitoring Unit (RMU)

Type	VISION ⅢR
Display	6" Monochrome LCD(340 x 240) Mist-Level Display Mode (Bar & Digital Value)
Scanning Time	50 msec for each point
Max. No. of Group	8 Groups (14pts per group)
Max. No. of Detector	112 points
Measuring Range	0~5.00 mg/ℓ
Communication Signal Output	RS-485(protocol : MODBUS Dual)
Memory	
Event log	3000 Data
History log	Every 10 sec up to 12hrs
Alarm & Failure Status Mist Alarm	
Mist high alarm	RMU-Red LED ON(Alarm Indicator Panel)
Pre-warning alarm	Alarm Channel Displayed on LCD
System fault alarm	RMU-Yellow LED ON (Fan / Communication Alarm IndicatorPanel) and Failed Channel Displayed on LCD
Alarm Setting	Mist High Alarm(Max. 2.5 mg/ℓ) Pre-warning alarm : User adjustable
Alarm Contacts	Mist High : N.O(8 ea) Pre-warning alarm : N.C(8 ea) N.O/N.C selectable 125 VAC 0.5 A, 30 VDC 1.0 A, 1a1b
Enclosure Rating	IP 44
Power	24 VDC
Current rating	1.5 A
Over voltage protection	+30% -20% of voltage rating (24 VDC)
Temp. Rating	0°C to 70°C
Dimensions	
Wall Mounting	H 200 x W 318 x D 102 mm
Flush Mounting	H 237 x W 353 x D 102 mm
Weight	6.0 kg
Housing	Carbon Steel

Specs® trusted VISION

SPECSVISION-5C

Diesel Engine Crank Case Oil Mist Detection System

Configuration

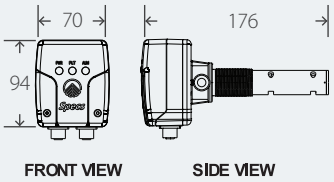
SYSTEM FEATURES

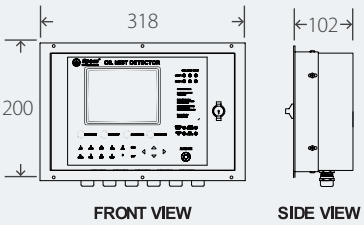
- Newest version based on recent IACS effectiveness verified based on M67 rules
- Superior accuracy verified
- Instantaneous response to alarm
- RS-485 / 422 to Ship's alarm monitoring system
- Multi- functional remote monitoring unit
- Most compact/rigid design
- Light scattering measurement
- Less contaminated sensor design
- No moving parts
- Robust anti-vibration assembly
- Upward/downward cable connection
- Access OMD system from anywhere around the world securely

SPECSVISION-5C

Diesel Engine Crank Case Oil Mist Detection System

TECHNICAL SPECIFICATIONS





Oil Mist Detector

Type	VISION 5C
Sensitivity	0.01 mg/ℓ
Communication Between RMU & Detector	RS-485
Indication	Green : Power ON Yellow : System Fault Red : Mist Alarm
5- Way Plug in Connector	Power : 1, 2 pin Signal : 3, 4 pin Shield : 5 pin
Mounting	3/4" PF
Enclosure Rating	IP 56
Power	24 VDC
Temp. Rating(Operation)	0°C to 70°C
Dimensions	H 94 x W 70 x D 176 mm
Weight	0.3 kg
Housing	PPA +GF 30%, Halogen free

Oil Mist Monitor

Type	VISION ⅢM
Max. No. of Detector Input	14 Loop Connection
Enclosure Rating	IP 56
Temp. Rating	0°C to 70°C
Dimensions	H 80 x W 110 x D 70 mm
Weight	0.35 kg
Housing	PC + ABS

Remote Monitoring Unit (RMU)

Type	VISION ⅢR
Display	6" Monochrome LCD(340 x 240) Mist-Level Display Mode (Bar & Digital Value)
Scanning Time	50 msec for each point
Max. No. of Group	8 Groups (14pts per group)
Max. No. of Detector	112 points
Measuring Range	0~5.00 mg/ℓ
Communication Signal Output	RS-485(protocol : MODBUS Dual)
Memory	
Event log	3000 Data
History log	Every 10 sec up to 12hrs
Alarm & Failure Status Mist Alarm	
Mist high alarm	RMU- Red LED ON(Alarm Indicator Panel)
Pre-warning alarm	Alarm Channel Displayed on LCD
System fault alarm	RMU-Yellow LED ON (Fan / Communication Alarm Indicator Panel) and Failed Channel Displayed on LCD
Alarm Setting	Mist High Alarm(Max. 2.5 mg/ℓ) Pre-warning alarm : User adjustable
Alarm Contacts	Mist High : N.O(8 ea) Pre-warning alarm : N.C(8 ea) N.O/N.C selectable 125 VAC 0.5 A, 30 VDC 1.0 A, 1a1b
Enclosure Rating	IP 44
Power	24 VDC
Current rating	1.5 A
Over voltage protection	+30 % -20 % of voltage rating(24 VDC)
Temp. Rating	0°C to 70°C
Dimensions	
Wall Mounting	H 200 x W 318 x D 102 mm
Flush Mounting	H 237 x W 353 x D 102 mm
Weight	6.0 kg
Housing	Carbon Steel

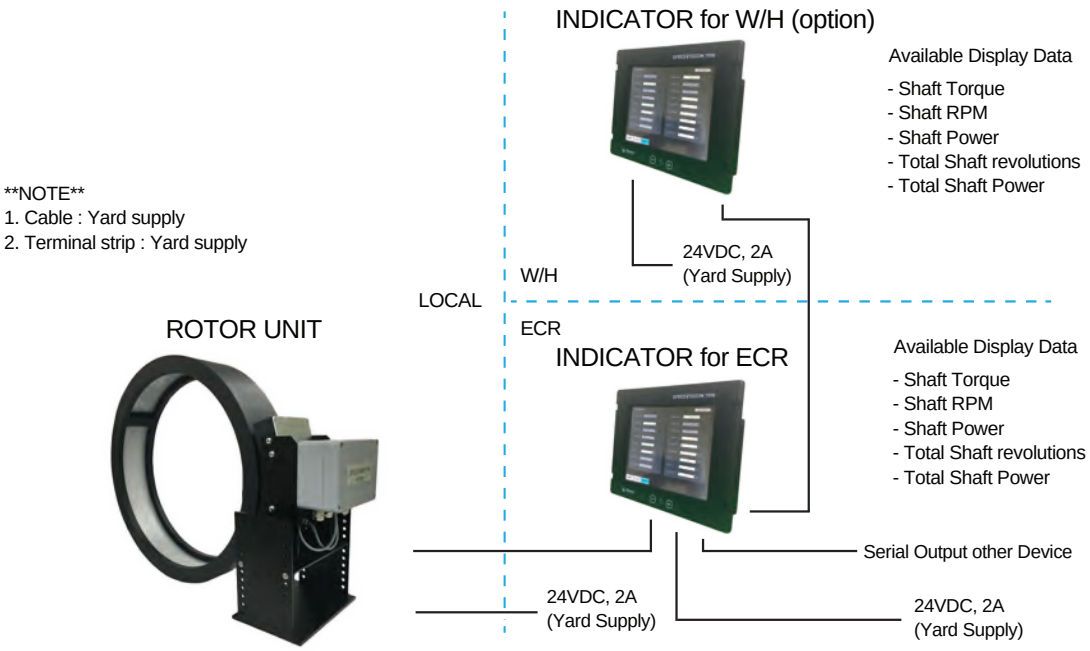
Specs® trusted VISION

SPECSVISION-TPM

Shaft Torque Power RPM Meter

SPECS Shaft Torque Power RPM Meter is simple, but it can measure and display shaft torque, thrust, power, RPM, rotating direction, accumulated rotations which are transferred from the main engine to the propeller by adopting strain gage and proximity sensor technique.
It is easy to install on all kinds of vessels both new and existed. Both metric and SI are available.

Configuration



SYSTEM FEATURES

- Easy to install by using simple bracket arrangement - No shaft modifications
  Robust design for operation in particular environments
- Various outputs available for all data logging requirements
- Maximum shaft speed of 1500rpm for all shaft sizes
- High accuracy and repeatability
- Optional thrust measurement
- Not affected by any pollutional or hazardous materials
- Digital data transmission for clean reliable data
- Simple calibration setup for increased accuracy of torque data
- Large on-shaft tolerance makes it easy installation
- Single or dual shaft applications
- Maintenance free operation owing to no mechanical wear

SPECSVISION-TPM
Shaft Torque Power RPM Meter

TECHNICAL SPECIFICATIONS

SHAFT SPECIFICATION	
Measurable Shaft Diameter Range	200 ~ 1000 mm

EQUIPMENT SPECIFICATIONS	
Sensing Element	
Torque	Strain gauge
Thrust	Strain gauge
Shaft Revolution	Magnetic sensing

Control Display Unit	Master(ECR)/Slave(W/H) mode installed on engine control room
Display	Shaft torque, RPM, shaft power Rotating direction, thrust(optional) Accumulated shaft power and revolutions
Communication	Analog output (4-20mA), serial output (RS-485/422)
Dimensions	W210 X H150 X D140 mm

Remote Indicator	Installed on W/H as a optional indicator
Display	Shaft torque, RPM, shaft power Rotating direction, thrust(optional) Accumulated shaft power and revolutions
Communication	Analog output (4-20mA), serial output (RS-485/422)
Dimensions	W210 X H150 X D140 mm

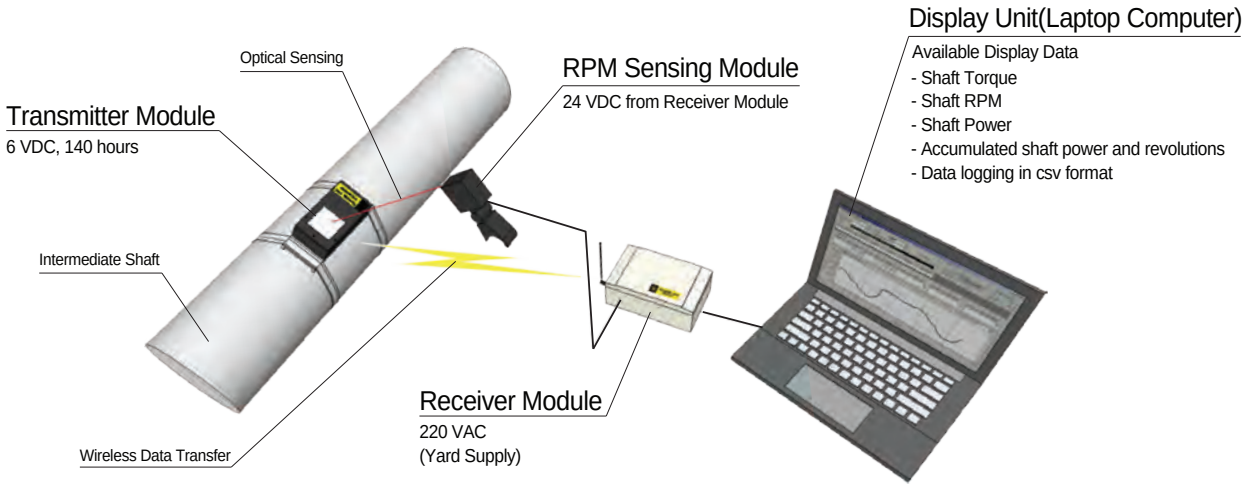
SPECSVISION TPMII	TPM-II can receive additional data from ship (fuel oil flow, fuel oil temperature, ship speed) and calculates ship's performance. This can help to determine the efficiency of the ship.

SPECSVISION Portable TPM

Portable Shaft Torque Power RPM Meter

SPECS Portable TPM is measurement instrument which can measure the shaft power by temporary installation at intermediate shaft of vessel. Users can measure the shaft power during the sea trial of vessel without a stationary shaft power meter. In that case, this portable TPM could help to check and verify the operating condition instead of the stationary power meter. Also Portable TPM is available to land applications which is required a torque measurement like Automotive drive shaft, Pumps & Compressors, Paper Mill, Wind power Turbine, Conveyors and etc.

Configuration



SYSTEM FEATURES

- **Available in small space (transmitter : W133 X H75 X D45 mm)**
- **Easy to install**
- **Optical sensor is used for measuring RPM.**
- **Provide the dedicated software tool for indication, storage and analysis**
- **Supplied with Strain gauge Installation Kit**

SPECSVISION Portable TPM

Portable Shaft Torque Power RPM Meter

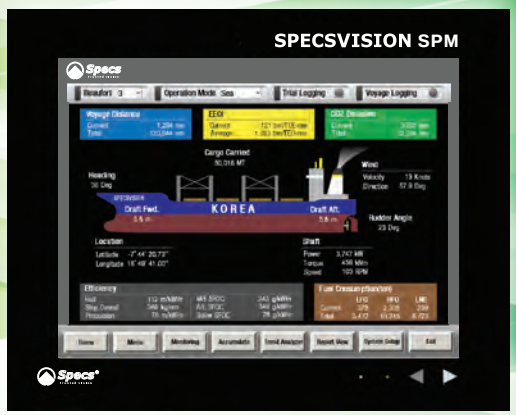
TECHNICAL SPECIFICATIONS

SHAFT SPECIFICATION	
Measurable Shaft Diameter Range	200 ~ 1,000 mm
Measurable Shaft RPM range	up to 500 RPM
Shaft material	Steel alloys
EQUIPMENT SPECIFICATIONS	
Sensing Element	
Torque	Strain gauge (resistance: 350 ohm, factor: 2.11)
Thrust	N/A
Shaft Revolution	Optical sensor
Accuracy	
For normal signals (>200 iS)	Torque: ± 0.1%, Power: ± 0.5%, RPM: ± 0.5%
Ambient temp.	5 ~ 50 deg C.
Display Unit (LAPTOP Computer)	Min. Spec.: CPU-Pentium 4, RAM-125MB, HDD-10MB of free space, OS-Windows XP, Power Input-100 ~ 240 VAC(50 ~ 60 Hz)
Display Data	Shaft RPM, Torque, Power Accumulated shaft power and revolutions Data logging by csv format
Communication	RS485 Serial communication with Receiver
Dimension/Weight	W300 X H200 X D20 mm / 2.0 kg
Receiver Module	
Input Power	220 VAC(60Hz)
Dimension/Weight	W160 X H100 X D60 mm / 3.0 kg
Transmitter Module	
Signal output	RF 2.4 GHz
Input Power	6 VDC (4 AAA alkaline batteries, min. 5 days active)
Dimension/Weight	W133 X H75 X D45 mm / 1.0 kg
RPM Sensing Module	
Measuring Range	up to 500 RPM
Measuring Distance	up to 3 meters
Input Power	24 VDC from Receiver
Dimension/Weight	W150 X H40 X D60 mm / 0.2 kg
Total weight	12 kg (all components, accessories, tools and suitcase)

Specs® trusted VISION

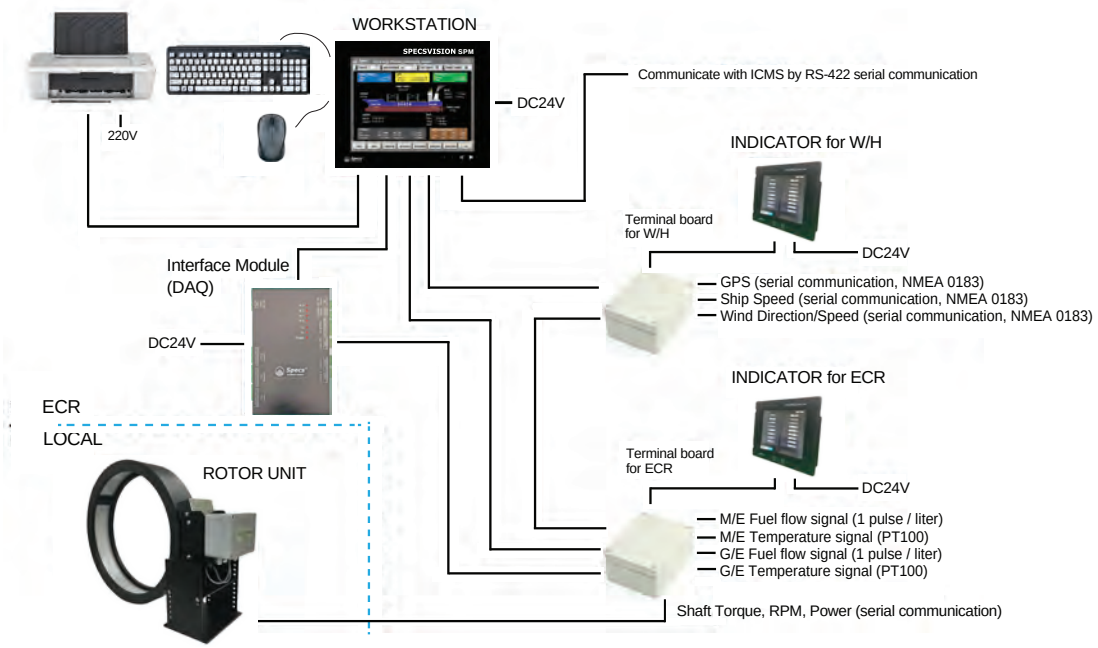
SPECSVISION-SPM

Ship Performance Monitoring system



SPECSVISION-SPM is most useful and practical tool for monitoring, reporting and verification of CO_2 emissions and energy efficiency of all ships. It has following functions which can be adjusted based on the different ship types, sizes and operational profiles.

Configuration

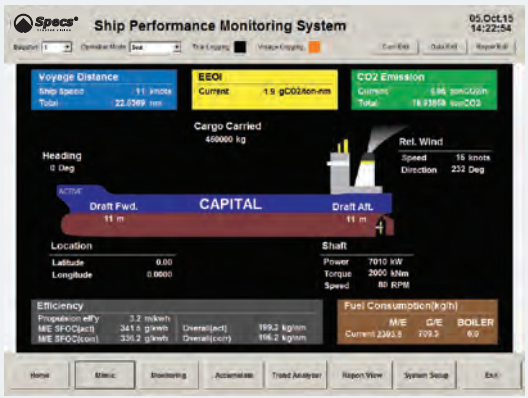


SYSTEM FEATURES

- **Calculates and displays EEOI& CO_2 emission values as a valuable SEEMP mechanism based on IMO regulations.**
- **Displays, prints and stores real-time measurements and performance data**
- **Presents trend graphs of the data for a variable period of time**
- **Displays actual operational values compared with reference values of ideal case**
- **Easy maintenance by applying slot type card to DAQ**
- **Enables users to store more than 150 different data**
- **Enables engineers to make the optimum plan for ship maintenance and/or renovation based on the stored performance data**
- **Presents daily, voyage and sea trial reports**
- **Transfers various data to the owner via ship's network for fleet management**
- **Access remote HMI from anywhere around the world securely**

SPECSVISION-SPM

Ship Performance Monitoring system



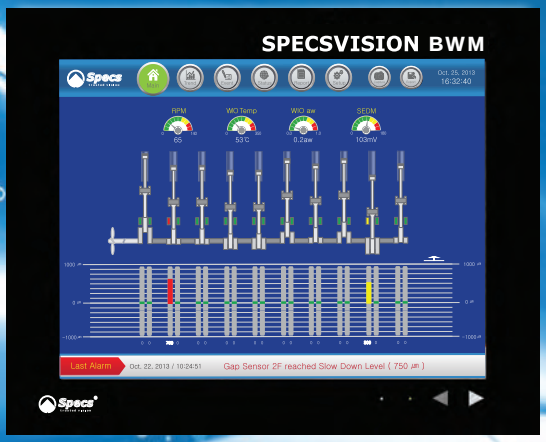
TECHNICAL SPECIFICATIONS

Input data	Interface for all possible data
Calculated values	Accumulated fuel consumption & main engine energy output, total revolutions, total distance travelled, main engine fuel efficiency, propulsion efficiency, vessel overall efficiency, EEOI and CO_2 emission
Reference curves	Shaft power vs. rpm, shaft power vs. ship speed, fuel consumption vs. ship speed, specific fuel rate vs. shaft power
Trend curves	Short & long term trend of all instant data and calculated values for max. 30 years
Displays	Numeric and graphic display in colors
Reports	Daily, voyage and trial reports
Main controller/Monitor	15-inch color TFT-LCD display, capacitive touch screen, 1024 X 768 XGA Windows 7, 500GB HDD, 6USB, 2RS232, RS485/422, 2Ethernet W385 X H307 X D100 mm Flush panel mounting
Data aquisition modules	Binary input : 4ch Analog input : 4ch (4~20 mA, 1~5 VDC, 2~10 VDC) Pt100 input : 4ch Serial Input : 2ch (RS-485, RS-422) Analog output : 4ch Dry contact output : 1ch Module extension : max. 4 modules

Specs® trusted VISION

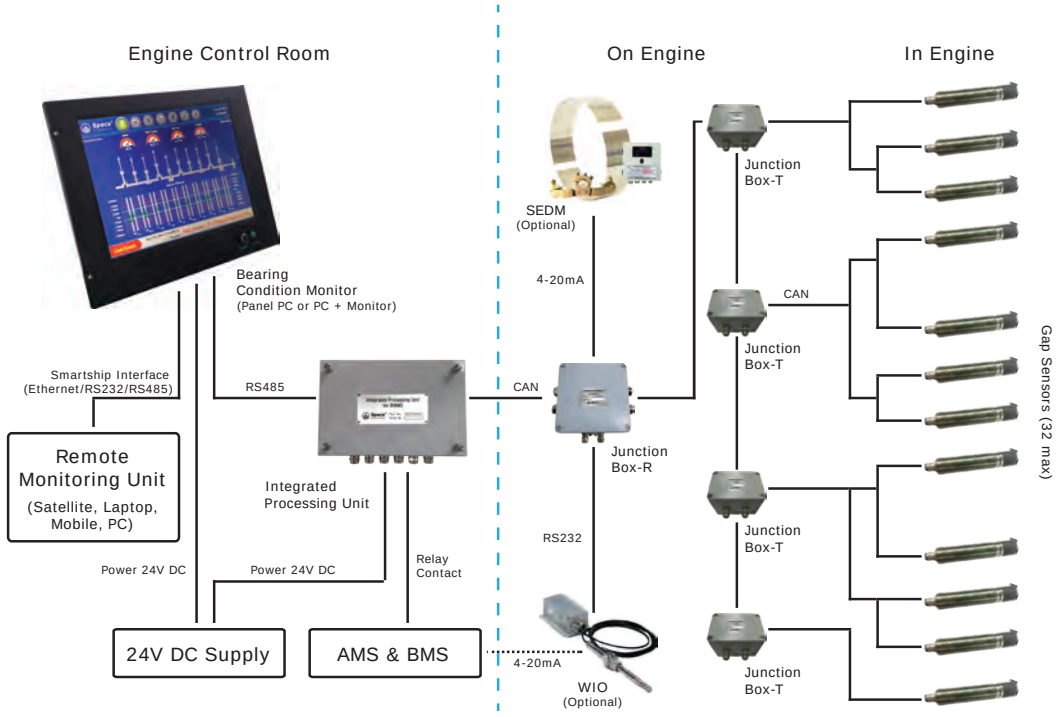
SPECSVISION-BWM

2-Stroke Engine Bearing Wear Monitoring System



SPECSVISION-BWM is a useful tool for predicting bearing wear in 2-stroke engine before it becomes critical condition and the system provides early alarm or slowdown signal if unexpected problem occurs at the crank-train bearings comprised of crosshead, crank and main bearings during engine operation.

Configuration



System Features

- Comply with latest MDT algorithm and IACS requirements
- Reliable and secure operation
- Most rigid structure
- Instantaneous response to alarm
- Interface with Ship's AMS & BMS
- Access remote HMI from anywhere around the world securely
- Simple installation
- Most compact/rigid sensor
- Temperature compensated sensor design
- Highly integrated system design
- Robust anti-vibration assembly
- User-friendly HMI

SPECSVISION- BWM

2-Stroke Engine Bearing Wear Monitoring System

TECHNICAL SPECIFICATIONS

Gap Sensor

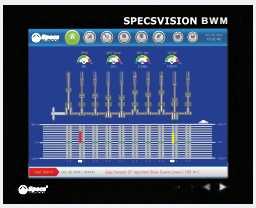
Measuring Range	0 ~ 5mm
Measuring Resolution	±0.001mm
Measuring Accuracy	±0.05mm
Power Supply	24V DC (-25 ~ +30%)
Operating Temp.	0 ~ 90 ℃
Output Signal	CAN
Protection Grade	IP 68
Vibration	>4G
Mounting	Custom designed bracket for different engine types
Dimensions	M22x1.0mm, L=109mm
Weight	108g
Characteristic	Temp. compensated compact type
No. of sensors per engine	Max. 32 (16 cylinders)

Junction Box

Power Supply	24V DC (-25% ~ +30%)
Interface	CAN
Protection Grade	IP 66
Operation Temp.	-20 ~ 85℃
Vibration	>4G
Dimensions (R)	W160 x H160 x D90mm
Dimensions (T)	W120 x H122 x D80mm
Weight	1.2kg

Integrated Processing Unit

Power Supply	24VDC (-25% ~ +30%)
Interface	CAN, RS485/232, relay contact
Protection Grade	IP 44
Operation Temp.	0 ~ 60℃
Vibration	>0.7G
Humidity	20 ~ 95% non-condensing
Dimensions	W320 x H210 x D85 (mm)
Weight	3.5kg



Bearing Condition Monitor

Power Supply	24V DC (-25 ~ +30%)
Interface	6USB, 2RS232, RS485/422, 2Ethernet
Protection Grade	IP 20
Operation Temp.	0 ~ 60℃
Vibration	>0.7G
Screen	Analog capacitive touch, 15inches, 1024 X 768 (XGA)
Dimensions	W402 x H330 x D80mm
Weight	8.4kg

Specs® trusted VISION

mampaey®

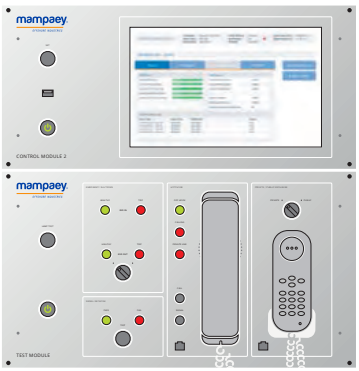
OFFSHORE INDUSTRIES

intelligent Multi Safety Link (iMSL)

Ship-to-shore Link (SSL) systems are key for safety communication during Shore-to-Ship and ship-to-ship cargo transfer operations. The systems are used to transfer Emergency Shutdown (ESD) signals and facilitate voice communication and data transfer.

The intelligent Multi Safety Link (iMSL) is the next generation LNG SSL system. It introduces new unique technologies and advanced functionalities. It complies with the diversity of global standardized LNG safety communication technologies. The iMSL is designed and built according to the SIGTTO guidelines and ISO28460 standards and is fully compatible with existing SIGTTO compatible SSL systems on LNG terminals and LNG carriers.

The iMSL is suitable for LNG Carrier / LNG Jetty / LNG FSRU / LNG Bunker Vessel.



SYSTEM FEATURES

- One solution for operational, testing & backup purposes
- Automatic voice communication recording function
- On board modem for Fibre Optic Mooring Load Monitoring data communication
- Configurable terminal sailing list & automatic pin configurator
- Full functional indoor end-to-end testing capabilities
- The iMSL cabinet is available in two different sizes: 600x600x1600 or 800x800x2000

mampaey®

OFFSHORE INDUSTRIES

intelligent Multi Safety Link (iMSL)

TECHNICAL SPECIFICATIONS

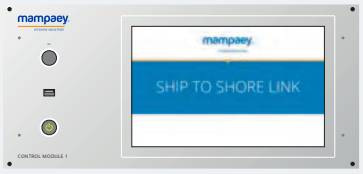
Primary Control Module

Ship-to-shore Link

The Primary Control Module is utilized for setting up an operational ship-to-shore Link.

Self-test

The Primary Control Module is capable of performing a passive automated hardware self-test in combination with a communication infrastructure health check.



Secondary Control Module

Backup (cold stand by)

In case of a malfunction in the Primary Control Module, the Secondary Control Module can be used as a 100% backup of the Primary Control Module to guarantee redundancy. This can be established within five minutes.

Full-functional end-to-end testing

A link loopback between the Primary Control Module and Secondary Control Module connects the test module with the local control room. This provides full-functional pre-berth end-to-end testing capabilities.

iMSL Accessories

Reels & Umbilicals

Hotphone & PABX

iMSL Small Scale

Fibre Optic Link Connectors

MLM Software

Specs® trusted VISION

SPECS Torque Power Meter technology is being adopted as ISO standard

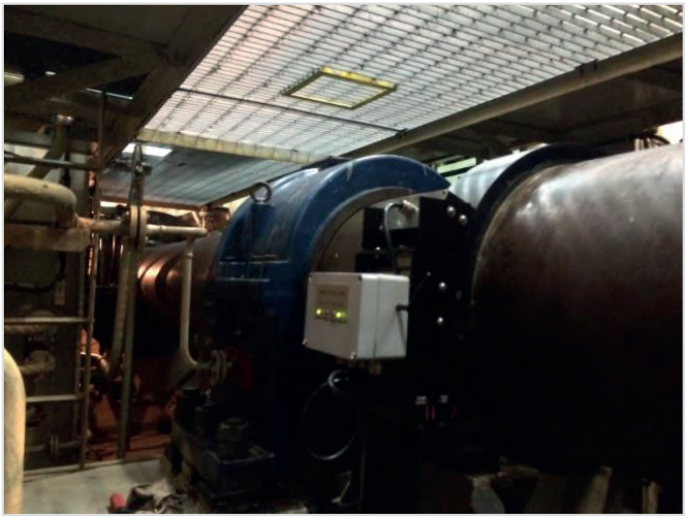
ISO Working Group meeting, ISO TC8/SC2/WG8, Shaft power measurement for ships, was held at Baltimore, USA to discuss ways to standardize the measurement of shaft power from last June 21 to 23. This meeting was hosted by Dr. Carolyn E, Junemann from USDOT maritime and ISO chairperson Dr Koichi Yoshida, Mr. ilsub Shin of KOMERI, Mr. Hideki Saito of JSTRA and others were attended.

Mr Justino Seo who is the senior researcher of SPECS was invited as an expert of shaft power meter.

He explained the need for standardization of the measuring shaft power and excellence of the strain gauge type torque measurement method which is including technology for improving data reliability.

In addition, he insisted the necessity of the equipment for the verification of Shaft power instruments in order to improve the reliability of these instruments.

The thing that makes this invitation of Mr. Seo as an expert in ISO conference is the proof of the recognition for SPECS technical expertise and also is the proof of the SPECS capabilities which have accumulated in shaft power measurement areas of the ship.



[SPECS Torque Power Meter is installed at vessel]

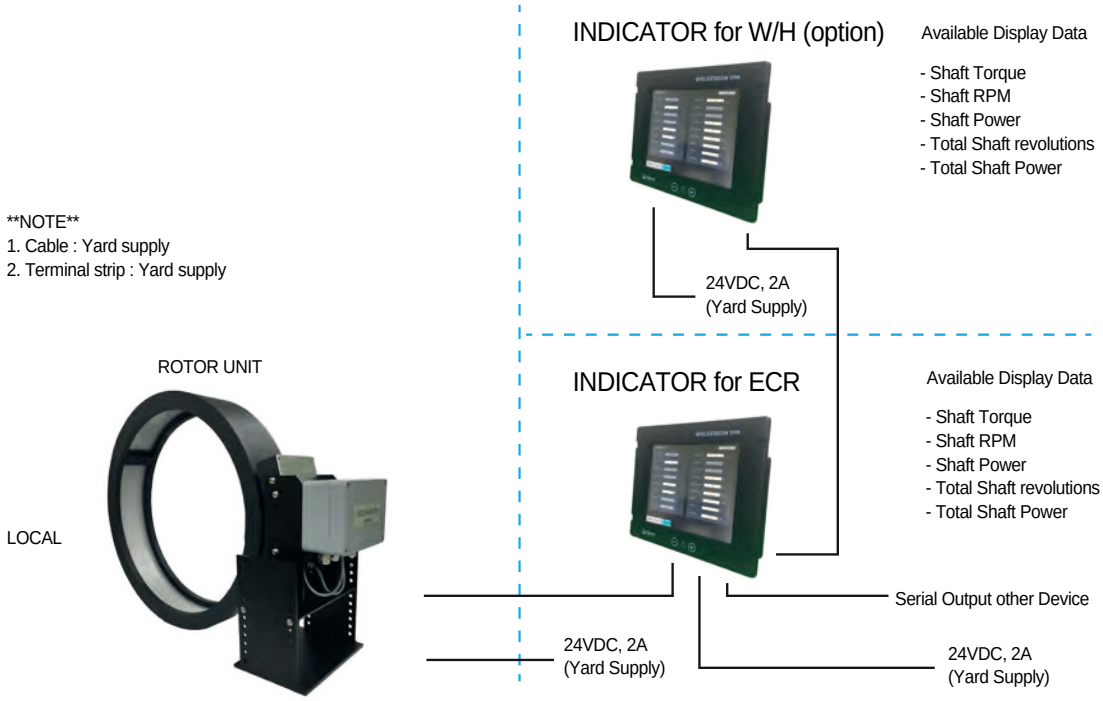
[Meeting was held at Cape Washington]

Based on these facts, SPECS products have been provided for over 110 vessels, Cardiff Marine, Dutch Shell, Hanjin Shipping, Hyundai Merchant Marine, SK Shipping, Pan Ocean, Hyundai GLOVIS and so on.

SPECSVISION products have already been proven in quality as well performance and obtained reputation of being the top quality products throughout global customers.

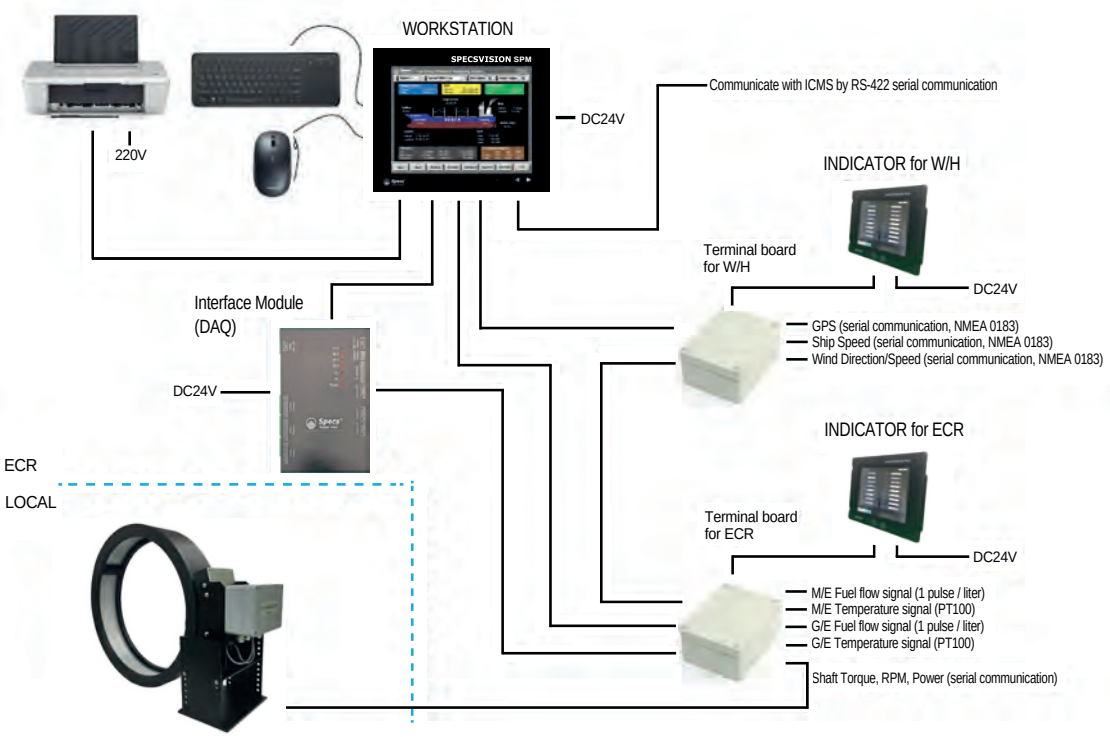
SPECS Shaft Torque Power RPM Meter

Simple, but It can measure and display shaft torque, thrust, power, RPM. Rotating direction, accumulated rotations which are transferred from the main engine to the propeller by adopting strain gage and proximity sensor technique. It is easy to install on all kinds of vessels both new and existed. Both metric and SI are available.



SPECS Ship Performance Monitoring system

Most useful and practical tool monitoring, reporting and verification of CO_2 emissions and energy efficiency of all ships, it has following functions which can be adjusted based on the different ship types, sizes and operational profiles



Global Service Network

SPECS provides local service and support at major locations world wide. Service and support work is carried out under the supervision of your personal quality manager, who will ensure that you receive high-quality service and solution where and when you need it by our well-qualified field service engineer.

All of your contacts with this quality manager will, we feel, give you confidence in our expertise and capability, of providing you with a fast and efficient service. This service will be specifically designed to improve and optimize your system performance and availability.

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