Servowatch
Marine Automation & Integrated Ship Solutions

ServoFusion

Vessel Type: Military Afloat Reach and Sustainability
Customer: DSME
System: IPMS

Vessel Type: Lifeboat Tamar Class
Customer: RNLI
System: IVMS

Vessel Type: Motor Yacht Monaco
Customer: Pendennis Shipyard
System: AMS

Vessel Type: Swath Crew Boat
Customer: Lockheed Martin
System: IVMS

Vessel Type: Fast Ferry KatExpress 2
Customer: Incat
System: AMCS

Project: Offshore Patrol Vessel
Customer: BAE Systems
System: IPMS

ServoFusion Overview

ServoFusion offers advanced bespoke solutions designed to suit the complex automation and integration requirements for operators of specialist vessels.

Scalable and Feature Rich

ServoFusion is capable of providing a fully integrated turnkey electrical and automation solution, being a scalable and feature rich system capable of incorporating:

- Alarm, Monitoring and Control System
- Integrated Platform Management System
- Integrated Navigation Bridge System
- Integrated Vessel Management System
- Integrated Communications
- Digital CCTV Surveillance
- Propulsion Control
- On Board Training System
- Power Management
- Condition Based Monitoring System
- Battle Damage Control System

Integration

Extensive integration enables us to include the data from various ship systems, including:

- Propulsion Plant
- Electrical Systems
- Auxiliary Machinery
- Tanking
- Piping Arrangements
- Tank Monitoring Systems
- HVAC
- Safety
- Security Management Platforms

Project Management

The success of any specialist, high-value new build relies heavily on effective project management.

We are with our customers from the outset, at the design and planning stages, right through to commissioning to ensure that each and every project runs smoothly and is delivered on time.

Software

Embedded at the heart of all our ServoFusion products is our dynamic WINMON software application, delivering 'state of the art' performance.

Through generations of applied know-how, this award winning product delivers a robust operating package, that allows operators to define the capability and complexity of their system in a uniform programming environment.

Main Engine Screenshot

VHF Screenshot

Bilge System Screenshot

Main Engine Screenshot

Seawater Cooling Screenshot

AMCS - Alarm, Monitoring & Control System

Designed to allow for scalability, flexibility and simplified upgrade opportunities, the AMCS can be fitted to any type or size of vessel. it can be used as a stand alone AMCS or integrated into our IPMS package.

Functions and Features
- Multipoint Serial Communications Gateway
- Remote Terminal Units
- Graphical Operator Workstations
- Local Operator Panel / Group Alarm Panel
- Cabin Call System (Extension Alarm System)
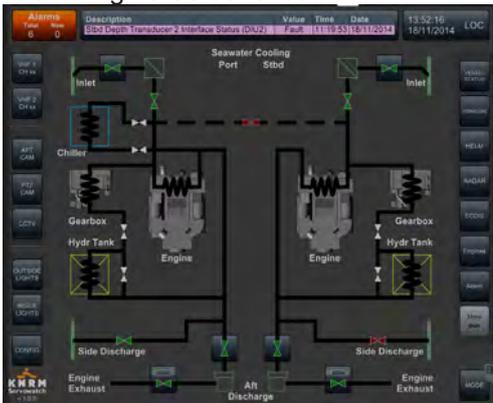- Data Logging and Trending Analysis

IPMS - Integrated Platform Management System

The IPMS provides integrated monitoring and control of ship propulsion, electrical and auxiliary plant management systems.
Integrating these capabilities at the platform level can optimise operational effectiveness and contribute to crewing reductions.

Functions and Features
- Multi-level Redundant Networking
- Remote Terminal Units
- Integrated Propulsion Control System
- Integrated Power Management System
- Integrated On Board Training System
- Condition Based Monitoring System
- Battle Damage Control System

INBS - Integrated Navigational Bridge System

Our INBS is designed to collect, process, and present navigational and other relevant data in a manageable format. It is capable of integrating all bridge equipment with our Alarm, Monitoring and Control System.
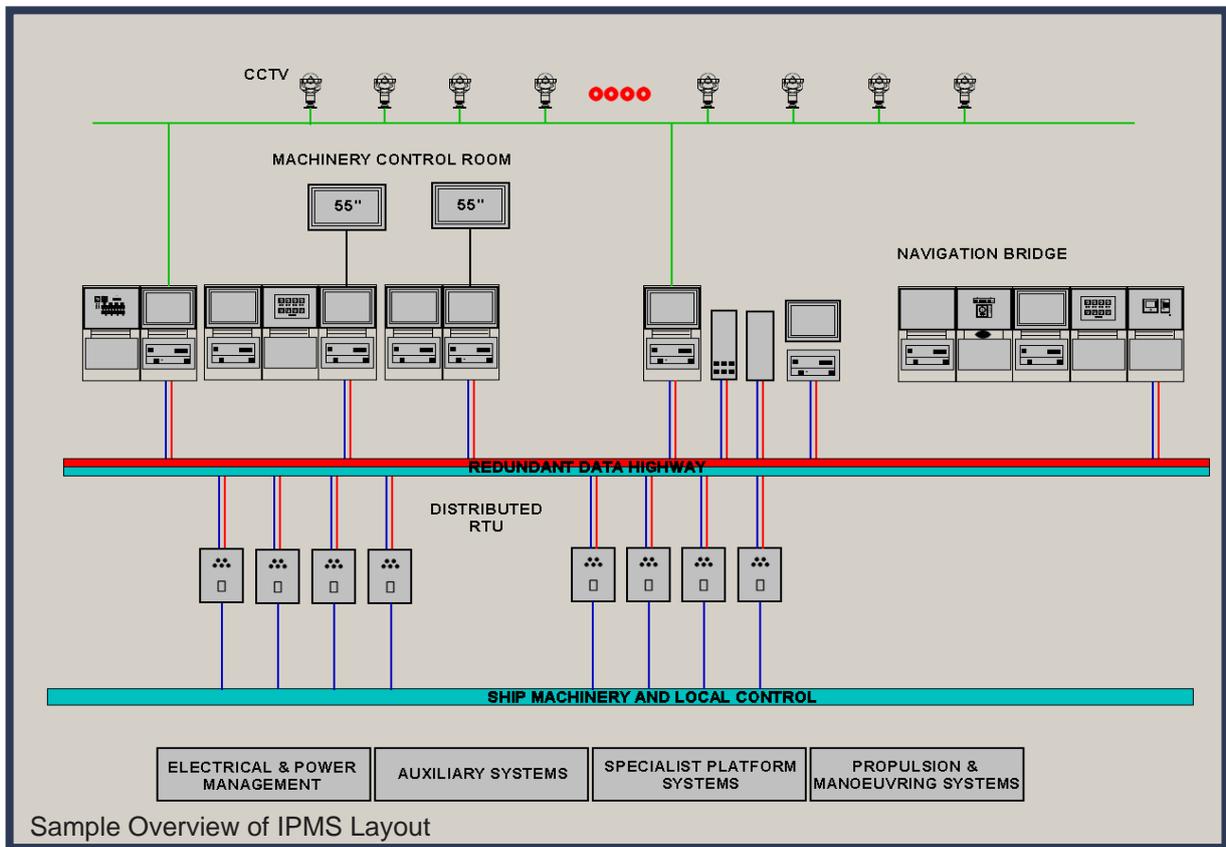
Functions and Features
- Radar System
- Critical Conning Display
- Alarm Management
- Dynamic Positioning
- Signalling and Navigation
- GMDSS and CCTV

IVMS - Integrated Vessel Management System

Designed specifically for special purpose craft, where redundant functions and inter-operability are critical for bespoke missions, for example, Border Police, Customs, Fisheries Protection, Search and Rescue, and Special Forces Rapid Insertion Craft.

Functions and Features
- Machinery Management
- Navigation and Communication
- Mission Recording Functions

Sample Overview of IPMS Layout

Diagram labels:
- CCTV
- MACHINERY CONTROL ROOM
- 55" 55"
- NAVIGATION BRIDGE
- REDUNDANT DATA HIGHWAY
- DISTRIBUTED RTU
- SHIP MACHINERY AND LOCAL CONTROL
- ELECTRICAL & POWER MANAGEMENT
- AUXILIARY SYSTEMS
- SPECIALIST PLATFORM SYSTEMS
- PROPULSION & MANOEUVRING SYSTEMS

Integrated Communications

A network based internal communications package provides full public address, talk back and point to point communications capability. Through on screen management at Operator Workstations, users create their User Profile to conduct tailored mission functions. Serial control of GMDSS radio equipment enables DSC data to be monitored at a Workstation level, supporting SAR or emergency operations. On screen mimics replicate the features of host radio equipment, making Operators comfortable with the presentation of the digital controls interface.

Additional VHF and COSPAS/SARSAT radio direction finding may be included with integration to the operational elements of the "Fusion Bridge".

Digital CCTV Surveillance

The CCTV system provides video monitoring of the ship's machinery spaces and other locations as required. Cameras can be connected to the AMCS, IPMS, INBS or IVMS consoles using the existing network, allowing the console screens to display the video images in various locations.

Propulsion Control

The propulsion control system provides remote control on the bridge, MCR & Workstations for engines, gearboxes and propellers and monitoring of engine safety, RPM/Pitch indication, telegraph and electronic governor.

On Board Training System

On board training functionality allows the operator consoles to be placed in training mode to facilitate full-mission team training on board the ship.

Power Management

The Power management system controls power generation and distribution, ensuring that the power capacity matches the demands at all times, and will control the restoring of power and auxiliary systems in the event of a blackout.

CBMS - Condition Based Monitoring System

The CBMS provides monitoring of vibration, ultra sonic measurement, motor current signature, infrared thermography, spectrographic oil analysis, tachometers, displacement probes and other sensors for machinery such as propulsion engines, shaft bearings, and generators.

Maintenance personnel are advised of the need for machine maintenance allowing them to make informed choices. Maintenance based on equipment health has been shown to significantly reduce life cycle costs for ship owners, in comparison to periodic scheduled maintenance.

Battle Damage Control System

Management of vessel safety systems is achieved by the BDCS function which provides early damage recognition and effective co-ordination of damage control actions.

- Damage plotting:

As damage information is acquired by the IPMS or entered at any console, all consoles are automatically updated providing a real-time, complete, up-to-date picture of the damage situation needed to effectively command the ship.

- Kill cards:

Pre-defined automatic control sequences can be activated. They can also provide checklists for crew assignment and damage management tasks.

The Future – We See it. We Shape it

As undeniable experts in the field of marine systems integration, the Servowatch philosophy is to deliver solutions to problems in the next generation; we don't follow the competition, we lead the competition!

Servowatch is the world leading supplier of advanced and innovative, integrated ship control systems, including alarm and monitoring, automation, platform management, navigation, communication and multimedia packages, into both new build and retro-fit markets.

Supporting an extensive customer profile including Naval Platforms, Commercial Ships, Patrol Vessels, Luxury Yachts, Search and Rescue, Specialist and Experimental Craft; Servowatch is unrivalled in its flexibility and capability to deliver solutions for the simple, or for the most demanding of projects.

The highly trained and professional teams at Servowatch are able to offer an extensive range of services. Normally included as standard technical support requirements within contracts, resulting from our strength of knowledge in the market place, we are also able to offer the following services for independent project requirements:

- Project Management

- System Design and Manufacture

- Systems Integration

- Software Design & Development

- Service & Maintenance

- Through Life Support Programmes

- Post Design Services

- Research & Development

- Training

- Console Design

- Commercial & Technical Consultancy

Servowatch – A Larsen and Toubro Group Company

Larsen & Toubro is a multibillion India-based conglomerate, engaged in technology, engineering, construction and manufacturing, and has a track record of projects that set industry benchmarks in scale and sophistication. L&T solutions are the outcome of well established innovation practices that are focused on meeting the needs of a variety of customers.

The Group's capabilities cover large process plants, construction, electrical distribution, electronics and information technology with many world's firsts to its credit. An industry major in the electrical and automation arena, the expansive L&T product portfolio has a strong reputation for quality, an innovative outlook and strong customer orientation.

As part of the L&T family, Servowatch enjoys a financial strength which enables investment into leading edge products and systems innovation for the marine industry. The company footprint continues to grow with an increasing share of the global automation, integrated bridge and maritime surveillance programmes.

A Global Presence

For detail of our global representation please contact our office

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