

IMACS

Integrated Monitoring, Alarm and Control Systems



IMACS is an **Integrated Monitoring, Alarm and Control System** for engines and machinery onboard ships. The system is comprised of Siemens PLC units in full redundancy, dedicated computers and field proven real-time monitoring & control software. The comprehensive system provides integration of on-board Power Management System, Tank Level indication, Anti Heeling and Loading program in addition to the incorporated standard Engine Monitoring and automation features. Shore-side back office version with offline data and fault analysis is also provided.

System Highlights

- Use of Commercial-Off-The-Shelf hardware eliminates dependency on dedicated, more expensive and less accessible "marinized" spare parts, enhancing serviceability and reducing repair time, anywhere in the world.
- Maintenance and fault detection are straightforward due to the SIMATIC-S7 PLC Push-Pull modules that can be hot replaced in no time.
- All workstations are connected on a common network and each station can take over the entire system regardless of potential failure(s) on other stations on the network.
- Existing computers on ship's LAN can log into the system at will.
This is restricted to monitoring purposes only, without any possibility of further interference to the IMACS system.
- Full redundancy of CPU and BUS - automatic take over in case that one PLC fails.
- Open architecture - easily fitted in every vessel environment.

Software Features

- Online screen monitoring of all captured/collected information.
- Machinery control (valves, pumps, generators etc.) via smart mimics GUI.
- Graphical representation of data vs. time (Trend Analysis) on all variables.
- Easy setting of alarm thresholds and time delay windows, as well as software driven sensors calibration
- Controlled access to critical operations to authorized personnel only.
- Long retention of data logging, with easy retrieval and "search" functionality.
- Offline analysis of data retrieved from "history" data base (re: Alarm statistics and Multi Sensor Analysis) - a unique tool for enhancing preventive maintenance quality
- "Back office" version for shore supervision provides extensive offline analysis of both data and alarms
- On line stability tests (GM Determination)

Kittiwake Hellas S.A.

37, Syngrou Avenue, 117 43 Athens, Greece
T +30 2104227267 | F + 30 2104227275
sales@kittiwakehellas.com | www.kittiwakehellas.com

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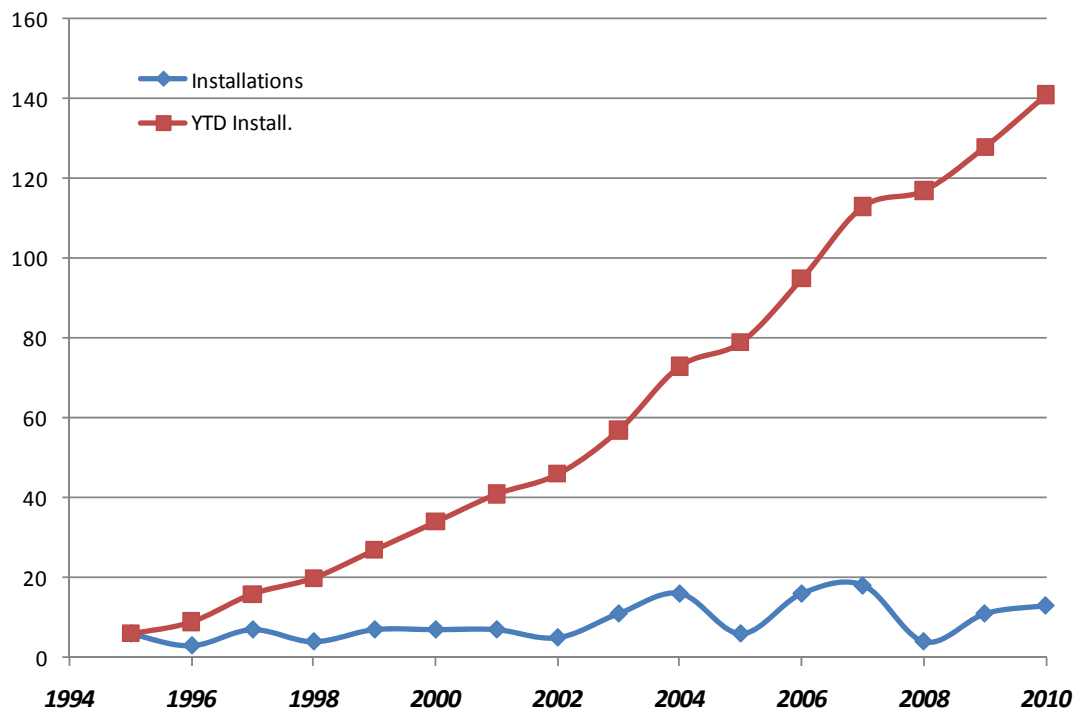


Proven Track Record

Installations

The IMACS system has been matured over the last 15 years, incorporating the emerging Information and Communication technology enablers.

System has been installed in new buildings, as well as retrofitting complete installations in vessels at a later stage, with minimal disruption. Below graph shows the evolution of IMACS installations and its ever growing market acceptance.



Vessels

A multitude of vessel categories tackled demanding monitoring and control needs by installing and using an appropriately customized version of IMACS system.

To-date the vessel categories that have installed IMACS, are:

- Car carrier 60 vessels
- Tanker 17
- Tug 12

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- Container 10
- Reefer 6
- Sealift transporter 5
- Floating Dock 2
- Pilot Boat 2
- FPSO 1
- FTS 1
- Yacht 1
- Other 24

Customers

The most prominent shipping companies around the world trusted IMACS technology, and enjoyed the quality of services and support offered by its engineers.

Among others, the to-date customer list includes:

- Agrexco
- Anglo-Eastern Ship Management, Hong Kong
- APL
- Barber Ship Management
- Eastwind Ship Management
- Frontline Management
- Gabon Electric Plant
- Great Offshore Limited
- IPRA
- ITM Management
- KG-Projex
- Maritrans
- Ofer Brothers Group
- Projex
- Socatra

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- Stamco Ship Management
- Tanker Pacific
- TPOT
- UK Interest
- Wallem Management
- Zodiac
- Zodiac Maritime Agencies

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