Six good reasons for SINAVY IPMS

- Comprehensive control functions of all integrated components increase system availability and operational reliability
- Cost-saving automation solutions from a single source: all components, from engineering to support, are perfectly adapted to one another
- Standardized procedural processes with national and foreign shipyards enable a rapid and error-free dispatch of maintenance and repair-measures worldwide
- Future-proof through expandability and compatibility with new technological developments
- Automatic damage control enables quick initiation of appropriate countermeasures
- Realistic training for critical situations directly on board

Thanks to its intelligent architecture, the "Integrated Platform Management System", SINAVY IPMS, ensures the highest degree of availability and operational reliability on board naval vessels. At the same time, the system relieves the crew of time-consuming routine tasks, enabling them to devote more time to their core duties.

SINAVY IPMS – crew support for safe and reliable vessel operation

A high degree of system availability and reliability under all operating conditions, as well as simple system operability – these are the basic requirements that any automation solution for naval surface vessels must be able to fulfill. With the help of a user-friendly, safety-oriented design, these solutions can significantly increase the chances of survival during a catastrophic event on board – a decentralized, modular architecture with a redundant bus system design greatly increases operational reliability in the event of severe vessel damage.

The better the crew is prepared for emergency situations, the faster and more efficiently they can react to them. Realistic training directly on board, as well as comprehensive automated monitoring functions of the vital ship components, provides assistance in quickly recognizing and eliminating potential dangers.

SINAVY IPMS – Our solution in detail

SINAVY IPMS, the Integrated Platform Management System for naval surface vessels, relieves the crew of routine tasks and simultaneously offers a high level of availability and operational reliability. SINAVY IPMS controls and monitors all power elements of the vessel, from the diesel motor to the gas turbine, gears, clutches, the electric propulsion, water jet pumps and the exhaust system. The Power Management System ensures ample supply and distribution of electrical energy in all situations. The IPMS controls and monitors ancillary modules of the vessel such as supply and distribution of fuel, as well as ventilation and fire alarm systems.

SINAVY IPMS

More security and support for the crew: highly available automation solutions for naval vessels

Marine Solutions

SIEMENS

Remaining mission-capability even in the event of an emergency

Should greater damage in a specific area occur on board the vessel, the decentralized, modular and redundant system ensures that vital ship functions remain operable. The operating stations are independent PCs that are supplied in parallel with processing data and continuously match these data with one another. In the event of an operating station failure, process monitoring and control are handled by the other operating stations without loss of data.

Operating stations and process control units are connected with one another via a redundant communications bus. Each of the bus strands is capable of handling the entire communication by itself. Should one strand fail, the other bus assumes its tasks without interruption.

The SINAVY IPMS software was specifically adapted for DOD-STD and V-Model. All components are "commercial-off-the-shelf" components (COTS), and reinforced to withstand severe surrounding conditions (e.g. shocks, vibration, EMV, etc.). The automation systems are comprised of components from the Siemens SIMATIC® S7 family, whose spare parts are readily available on short-term notice worldwide.

Control is better

Decentralized operating stations, distributed throughout various areas of the vessel, visually display the operational processes. All signals and measurement readings are simultaneously recorded, and processed both in so-called substations as well as decentralized, peripheral intelligent terminals. For the analysis of errors and of unusual operational events, relevant processing data are stored long-term for later analysis.

Internal test functions cyclically test the IPMS hard- and software and report failures at the component-group level, serial interfaces and the bus system. Errors occurring within subsystems (e.g. diesel propulsion, ventilators, fuel supply, etc.) are also identified and displayed.

Quick and appropriate action in the event of an emergency

The "Battle Damage Control Management" (BDCM) provides a quick overview of the damage situation on board and, if necessary, supports the crew with instructions (kill cards) on initiating appropriate actions and countermeasures.

Training on board

Additional computers allow the operating crew to conduct realistic on-board trainings. A simulation computer allows operators to define individualized training scenarios. The training scenario can be monitored and controlled from the control console.

SINAVY – Integrated Solutions for the Navy

As a comprehensive industry-specific solution for naval vessels, our SINAVY product family integrates all the products and services you need for sustained maximization of your ship's performance.

For each particular task, a solution has been defined that

- **horizontally** improves all of your ship's operations
- **vertically** integrates the ship's information and security management end-to-end, helping to make better-founded decisions
- and, at the same time, is designed for optimal vessel-specific maintenance and comes with assured further development **over the whole life cycle.**

Due to this unique combination of horizontal, vertical and life cycle dimensions, our solutions all carry the genes of an exhaustive and sustained plant productivity in their very core.

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