



WÄRTSILÄ WICHTRONIC PROPULSION REPLACEMENT SYSTEM



Wärtsilä Wichtronic Propulsion Control Systems have been in use for 30 years, and several components in the Wichtronic systems have or will become obsolete.

In order to overcome operational interruptions, additional costs, extended repair times, and off hire caused by unavailable parts, a standard replacement system has been developed for Wichtronic Control Systems.

The Wichtronic Replacement System optimizes the entire propulsion control installation, including upgrading the old analogue system cards in the remote control system with a PLC based digital system, without any replacement of cabling. The result is improved accuracy and an up-to-date system controller.

The system represents a custom-made solution based on standardized components. It can consist of the existing functionality or include optional new system benefits. It is in all cases reliable, easy to use, and easy to install.

NEW CONTROL SYSTEM BENEFITS

The upgrade package offers the potential for considerable savings by implementing up-to-date control algorithms, and by maintaining the current operational functionality of the system:

- Lower fuel consumption by optimizing combinator curves
- Reduced maintenance costs by avoiding too quick loading and unloading of machinery for running-up/down
- Wave filter provides more effective load control to reduce engine and propulsor wear

Available functions include:

- Cruise control
- Pitch fine tuning
- Load acceptance
- Combinator
- Load limit (constant load mode)
- Frequency variation (50–60Hz floating frequency)
- Flow meter (measured consumption)
- Estimated flow (calculated consumption)
- Wind milling protection



SUPPORT

The hardware and software used are the same as in our portfolio Lipstronic 7000 control system. This ensures excellent long-term support for spare parts and technical inquiries.

INSTALLATION

Installation of the Wichtronic Replacement System can be carried out quickly and safely, thereby reducing the downtime of the vessel to a minimum.

The Wichtronic Replacement System is delivered on a 19" rack mounted board that is to be installed in the cabinet of the old Wichtronic system. The standard replacement system will require some cabinet internal reconnection, but all other cabling may be re-used.

SHORT DELIVERY TIME

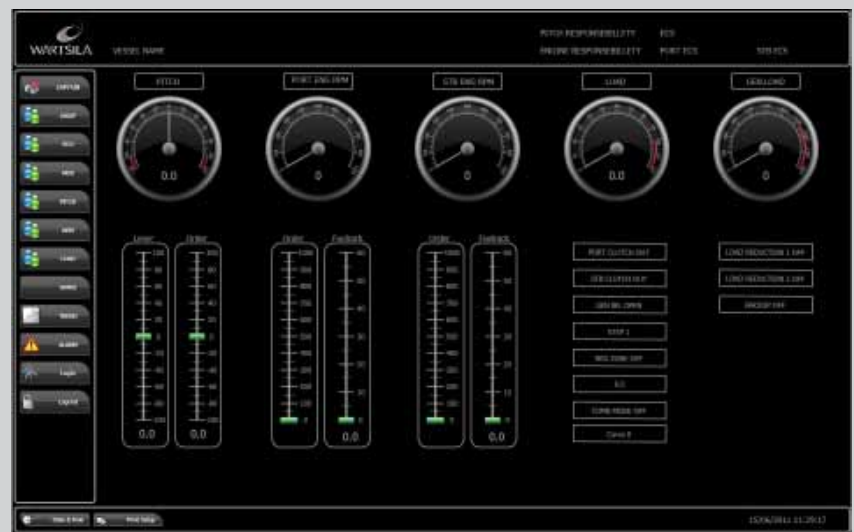
The hardware is normally available from stock, and the delivery time basically depends on the time required for class approval, engineering and testing, with reference to the complexity and functionality of the existing system.

SCREENING OF THE CONTROL SYSTEM

This replacement solution covers obsolete parts or upgrades for the analogue system cards in the Wichtronic systems.

Other parts/functions that may be approaching obsolescence can also be considered for upgrading. Effected parts can be the PLC system for clutch and engine start/stop and the propeller rpm indication system. Wärtsilä can provide a screening report regarding parts availability, and advice on possible upgrades to ensure extended service life.

Future needs of the control system should also be evaluated, since a completely new control system may be beneficial in order to meet charter requirements.



NEW DISPLAY SOLUTION

We also offer a display solution using the latest technology available in order to achieve a quick propulsion system status, the possibility for trending of system parameters during operation, and when service work is carried out on the propulsion system, i.e. to have a better overview when tuning the system.

The scope of delivery can include:

- Overview of all essential parameters
- Overview of the entire pitch and load control loop, for an easy and fast status overview or fault finding

- Trending of the system parameters
- Logging of the system parameters with possibilities for save to file for remote analysis
- Overview of fuel consumption, either by calculation from the existing flow meters, or based on our "estimated fuel calculation system" that calculates consumption based on the engine parameters.