

ENERGY
ENVIRONMENT
ECONOMY

WICHMATIC II PROPULSION RETROFIT



Wichmatic II systems have been in use for almost 20 years, and certain spare parts are now becoming obsolete.

In order to overcome operational interruptions, additional costs, extended repair times, and off hire caused by unavailable parts, a replacement system has been developed. This retrofit optimizes the entire Wichmatic II installation, including upgrading the old system cards and “brain” in the remote control system – without any replacement of cabling. The result is better accuracy and an up-to-date system controller.

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

- Frequency variation
- Flowmeter (measured consumption)
- Estimated flow (calculated consumption)
- Windmilling protection.

SUPPORT

The hardware and software used are the same as in our portfolio LT7000 control system. This ensures excellent long-term support for spare parts and technical inquiries.

INSTALLATION

The system has its own exclusive interface card. This allows installation of the retrofit system to be carried out quickly and safely, thereby reducing the downtime of the vessel to a minimum. All existing cabling and panels may be re-used, and only small modifications are necessary for fitting the new parts. ■ ■ ■

ADDED SAFETY

Included as part of the upgrade package, the pitch driver card (main and backup) and the changeover relay between the main and backup, are renewed. For installations with only one driver card, we update the installation so that it has its own driver card for backup control.

SHORT DELIVERY TIME

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

SCREENING OF THE CONTROL SYSTEM

This retrofit solution covers obsolete parts for the computer/system cards in the Wichmatic II system. Other parts/functions that may be approaching obsolescence can also be considered for upgrading. Wärtsilä can provide a screening report regarding parts availability, and to advise 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 HMI INTERFACE WITH TREND AND LOG POSSIBILITIES

In order to monitor the status of the system, and to have a tool for trending and logging of the system's parameters, we offer an HMI interface using the latest technology available.

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 flowmeters, or based on our "estimated fuel calculation system", that calculates consumption based on the engine parameters.

