

At your request, we will send you our proposal for retrofitting your "old" propulsion control system. However, if you would appreciate our engineers to advise you about the possibilities for a refit of your system beforehand, please do not hesitate to contact us.



KWANT CONTROLS
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RETROFIT



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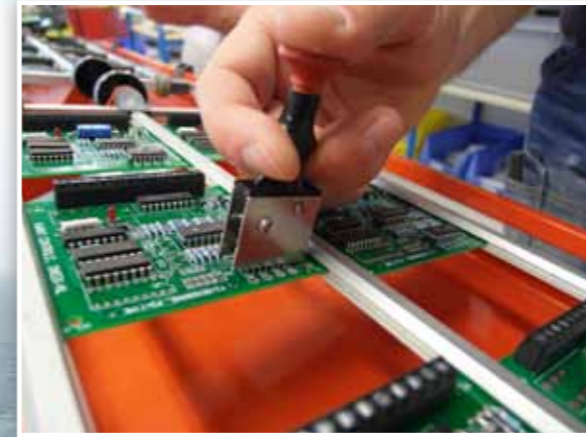
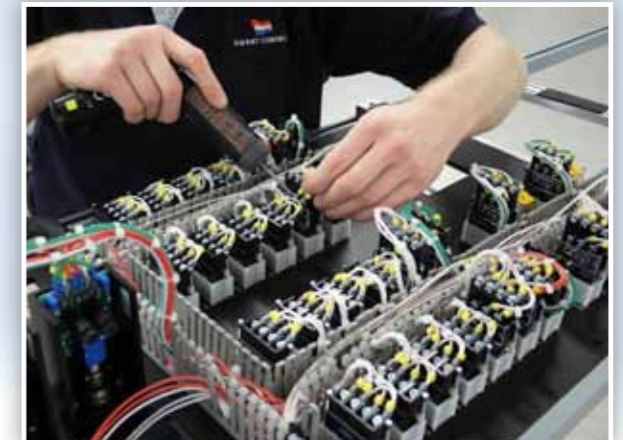
RETROFIT

For many years KWANT CONTROLS (previously known as Stork-Kwant) has been one of the leading manufacturers of marine equipment in the world. Our core business is manufacture of control units, indicators and associated products: for example, various types of telegraph and lever line-up systems.

The electronics revolution in the last two decades has led to huge changes from specially designed analogue modules to fully programmable digital systems. As a result, more and more analogue components have become obsolete and, as a consequence, the electronic boards used in them may no longer be available.

In addition, the younger generation of service engineers is no longer suitably skilled to service and repair these older analogue systems. So, having spare parts onboard does not guarantee uninterrupted ship's service. This is becoming a serious but currently ignored risk for ship operators, because a major malfunction in the control system can cripple a vessel for a long time.

The good news is that a retrofit with modern electronics can reduce this risk, and will also result in lower maintenance costs and possible lower fuel consumption.



FURTHER POSSIBLE ADVANTAGES

- * Use of existing cables and interfaces (if possible).
- * Advanced control, especially for controllable pitch propellers, such that fuel consumption can be reduced.
 - For example:
 - Using push buttons for electrical fine setting, the optimum pitch position or engine r.p.m. can be set easily.
 - Programmable non-linear engine curves can enlarge the usable range on the control lever.
 - Improved engine load control will reduce the exhaust gas emissions and thus reduce environmental pollution.
- * A user friendly interface.
- * Remote access for monitoring and remote assistance. Since the introduction of the Internet via satellites, many new maintenance capabilities have become possible. This, together with developments in micro-electronics, has also enabled remote diagnostics. This drastically reduces maintenance costs and saves time.



As a manufacturer of control systems, KWANT CONTROLS also has the flexibility during a retrofit to optimize the inputs. After many years of sailing the ship, the crew often has good ideas to improve the bridge interface. This, together with an upgrade of the electronics, will improve the overall operational efficiency of the ship.

