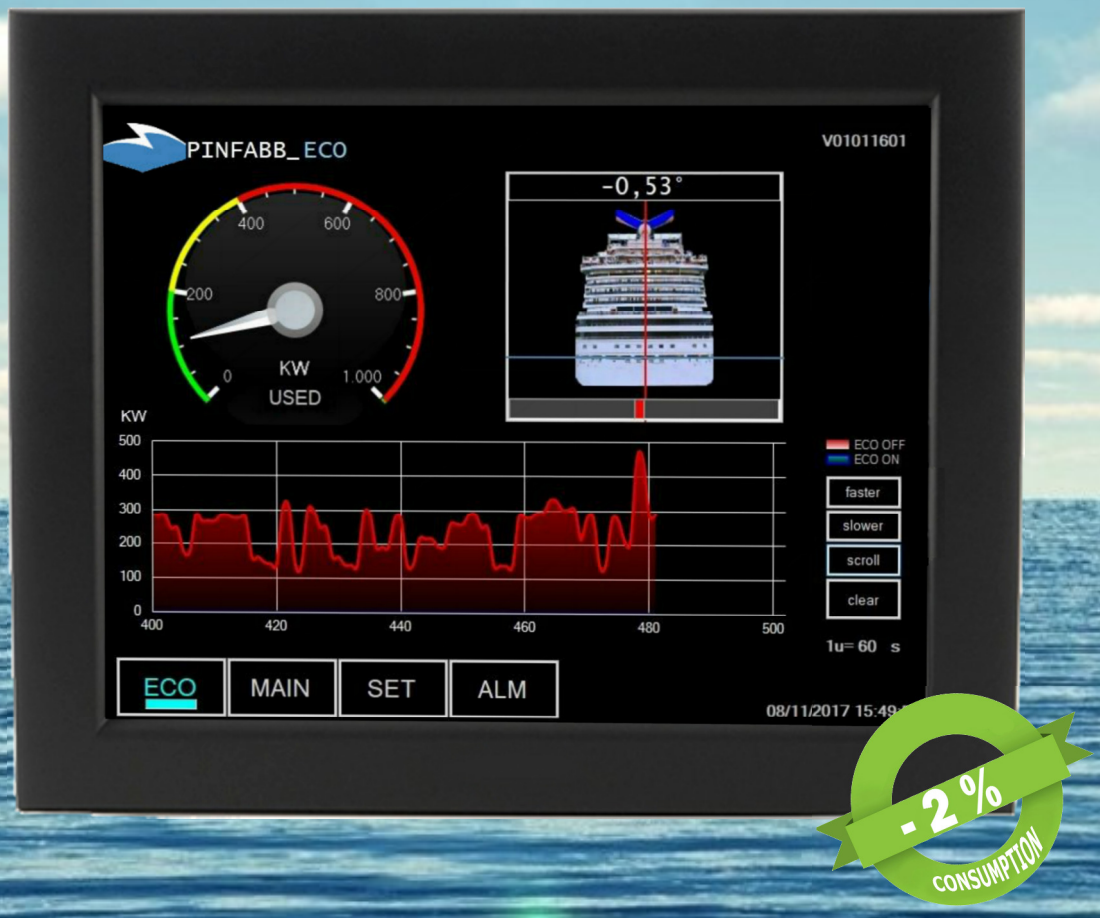
PINFABB_ECO

ENERGY SAVING TOOL FOR FINS STABILIZING



Make your fins smarter

A Pinfabb green technology product

pinfabb
ship stabilization & energy

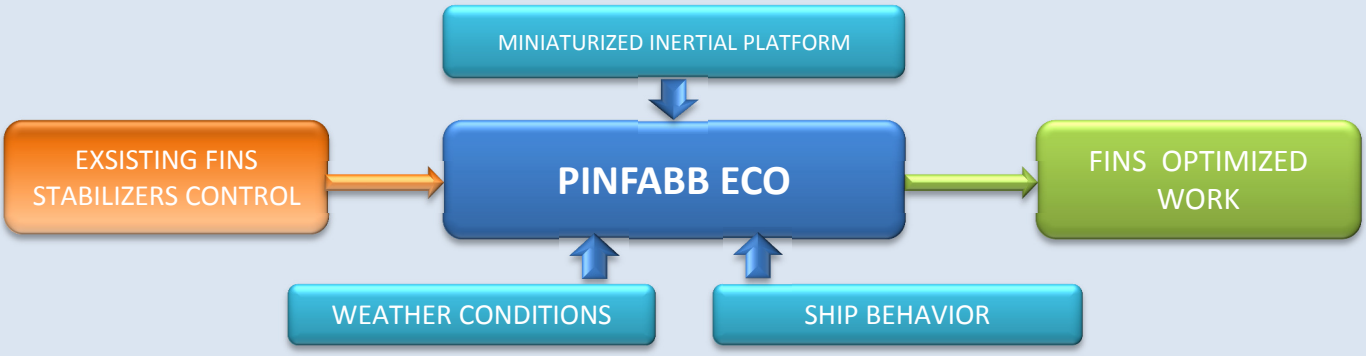
Pinfabb_ECO

THE IMPORTANCE OF AN EFFICIENT MANAGEMENT OF THE STABILIZERS

One of the biggest problem with the stabilizers consumption is the lack of information about the proper management of the fins.
In fact it doesn't exist a dynamic guideline for an optimum use of the fins, but their activation is normally based on static instructions or captain decisions. In some cases the fins are rigged-out only when strictly needed, in other cases the fins are rigged out as soon as the ship takes its way out from the port of origin, no matter which are the weather conditions.
If also an insurance aspect is considered, it results clear the need for an automatic system capable to manage the stabilizers smarter, taking in consideration various dynamic information to obtain the maximum performance from the stabilizing fins, in order to keep a high level of comfort on board and to reduce the CO2 emissions as much as possible.

not optimized stabilizers work

An improper use of the stabilizers means a loss of cruise speed, that generally can reach 1 knot or more (depending on ship design and weather conditions) and a dissipation of 3 - 4% of the ship propulsion energy.
Conventional Stabilizing Fins Controls are designed to manage the fins keeping in consideration only 2 variable factors: SPEED and GYROSCOPE OUTPUT, and in many cases the speed input is not correct or manually adjusted.
Having at disposal new technologies and knowledge, and with the international aim to reduce the amount of CO2 emissions generated by the shipping industry, it's today possible to improve the ship efficiency and its EEOI also optimizing ships stabilizers functions.
Pinfabb_ECO, proven to optimize the stabilizers use, decreases the drag and the hydrodynamic breaking force until reducing the energy absorbed by the fins up to 50%, that means a global 2% of saving on the ship propulsion energy.



HOW IT WORKS

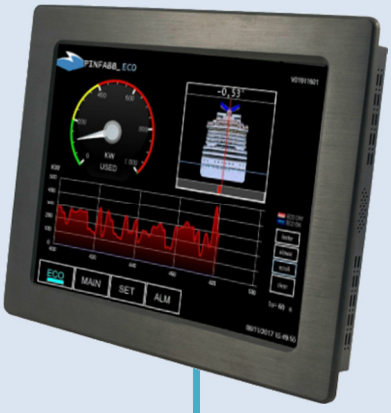
Pinfabb_ECO is an automatic energy saving tool installed (with a not invasive method) between the existing control system and the fin's actuator to optimize automatically the function of the stabilizers, according with the real-time sea weather conditions and on-board comfort. This system works in background permitting to the ship to keep the stabilizers out without impacting on the cruise speed and the ship consuption.

SEEMP AND ENERGY EFFICIENCY INTEGRATION

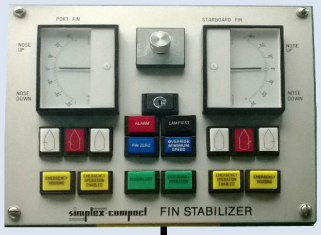
Pinfabb_ECO is designed to be installed in those stabilizers plants where the stabilizing fins control **is perfectly working.**
The purpose of this tool is to improve the efficiency of the existing stabilizing system, reducing the impact that the fins give to the cruise speed and to the ship underwater efficiency.
Moreover to giving useful real time indication about the ship fins consumption and efficiency, Pinfabb_ECO can also be added to the SEEMP as a system installed to reduce the CO2 emissions of the ship and to improve the energy efficiency of the vessel.

Pinfabb_ECO

INSTALLATION



10" CONTROL PANEL

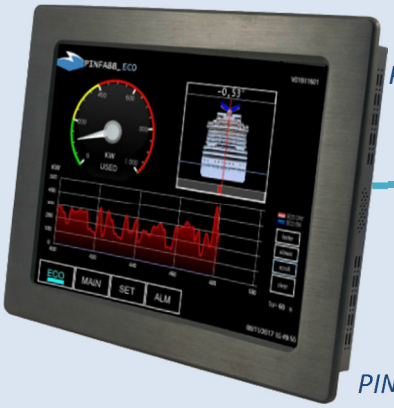


EXISTING FINS CONTROL

WHEELHOUSE

GPS

PINFABB INERTIAL PLATFORM



NMEA DATA OUPUT

PINFABB CPU NUCLEUS II

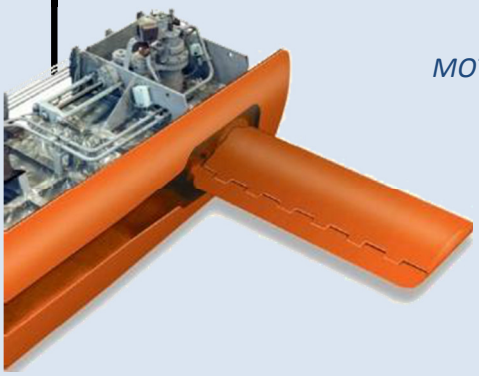
ENGINE CONTROL ROOM

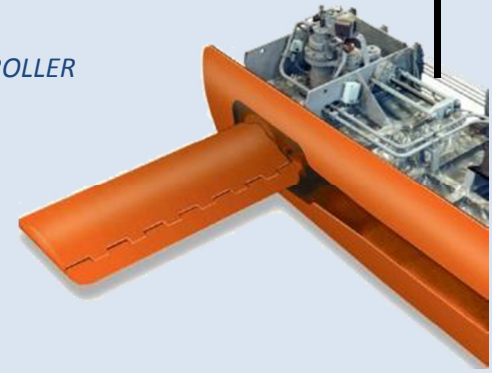
Ethernet Cable

EXISTING FINS LOCAL UNIT

EXISTING FINS LOCAL UNIT

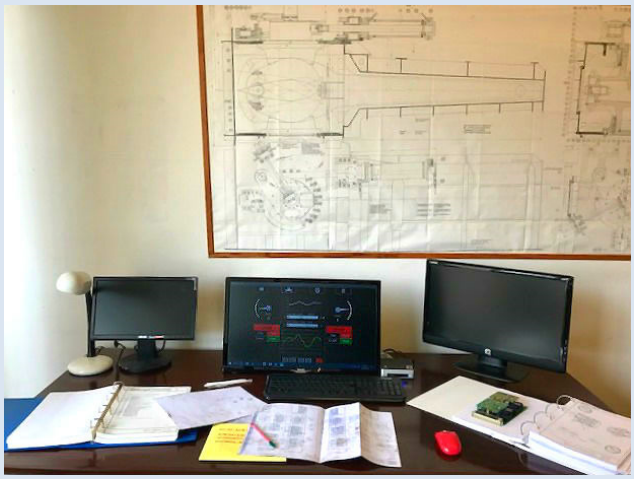
PINFABB MOTION CONTROLLER





WORLDWIDE SERVICE AND REVOLUTIONARY REMOTE ASSISTANCE

"PINFABB SERVICE ROOM"



Pinfabb Service Room is a space created in our Head Office where Pinfabb engineers provide the remote assistance and online diagnostics services to ships and crew. The room is composed with complete Pinfabb systems and all simulator which recreate the real on-board conditions. When the remote assistance connection is enabled by the ship, our engineers help the crew with fault finding, repairs and remote commissioning, exactly like being on board, saving to the Owner service costs.

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