

# SHAFT POWER, TORQUE & THRUST METER

## OPTIPOWER

### HULL & PROPELLER EFFICIENCY MONITORING

One sensor lots of savings.

Know, monitor & predict the propulsion system behaviour.

Ship energy efficiency optimisation.

Anticipating and preventing operational costs.



**TECNOVERITAS**<sup>®</sup>

Dedicated to innovation



# OPTIPOWER

## The torque & thrust meter to optimise your ship's performance

Optipower is an accurate sensor technology that measures Torque & Thrust, as well as speed and power, to identify and segregate inefficiencies, by defining and monitoring some very important KPI.

These measurements provide the most needed and precise information about the propeller efficiency related to energy consumption.

The outputs can be linked to the ship data network or to ship data monitoring systems, such as:

- > VEEO (Voyage Energy & Emissions Optimiser);
- > BOEM-S (Cloud-based platform for ship performance optimisation).



Optipower Basic was developed to monitor the propulsion plant performance easily and accurately, including:

- > Shaft Power (kW or HP);
- > Shaft Torque (kNm);
- > Shaft Speed (RPM).

### OPTIPOWER PLUS

This more complete solution allows the measurement of Thrust and may include a touch screen where the signals of Torque, Thrust, Speed and Power may be visualized and logged, therefore resulting in a very economical solution to monitor ship performance.



# MAIN FEATURES



## OPTIPOWER 4 YOUR SHIP BENEFIT



Optipower - Torque & Thrust Meter allows you to determine two of the most important parameters of a propulsion system - **torque** and **thrust** - to optimize the energy efficiency of your ship, including **savings of up to 5% of fuel**.

### One sensor lots of savings



By linking power measured on the shaft and the impulse with the ship operational variables (consumption, distance in miles originating consumption/mile, etc.) Optipower - Torque & Thrust Meter allows the segregation of the causes of the propulsion plant inefficiencies, for example, if it is due to a foul hull, foul propeller or a problem on the main engine.

### Know, monitor & predict the propulsion system performance



The propulsion system is one of the most important systems in a vessel and is often ignored. However, its monitoring and analysis with sensors, such as the Optipower - Torque & Thrust Meter, makes it possible to optimize the ship's energy efficiency.

### Ship energy efficiency optimisation



The Optipower has the ability to perceive the evolution of the engine efficiency, by measuring the power to the shaft, and has the ability to predict the evolution of the ship's resistance, through the relationship between the several measured variables.

### Anticipate and prevent operational costs

By analysing these, it's possible to plan maintenance actions to prevent unexpected downtime, which often generate unnecessary expenses.

## ABOUT TECNOVERITAS

TecnoVeritas is a specialist provider of engineering services and solutions to the shore and marine industries, with more than 20 years of experience.

Head quartered in Portugal with a global reach, TecnoVeritas is focussed on emissions and energy management, and has a strong track record of delivering high quality solutions combining innovation with world leading technical expertise.

### Dedicated to innovation

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