

# How Much is Hull Fouling Costing You?

HULL MEDIC provides the Business Intelligence to:

- Optimize hull & propeller cleaning intervals
- Scientifically evaluate coating effectiveness
- Save money by including hull monitoring in your SEEMP

## Reduce Fuel & GHG Emissions

Ship owners waste millions of dollars per year because of fouled hulls. Our HULL MEDIC service can help you eliminate energy waste from hull fouling and become a better global citizen by reducing GHG emissions. It's easy to incorporate our HULL MEDIC service into your SEEMP as a proactive step to achieve real cost savings by eliminating fuel waste due to fouling.

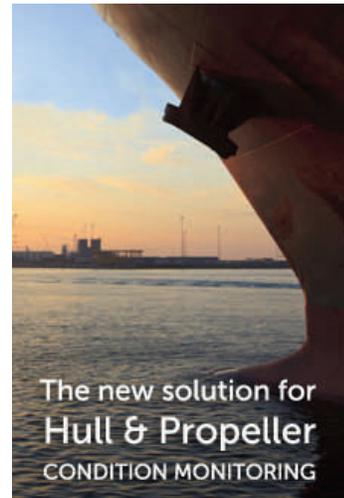
Hull condition monitoring doesn't require a big investment and can offer a quick ROI. You may already be collecting most of the necessary data.

## Analytics as low as \$495/ship/month\*

If you have suitable data, send it to us for monthly analysis.

If you don't, we'll help you set up a turn-key shipboard data acquisition system that will capture key ship performance measurements and transmit them to our Cloud-based server for analysis.

We can offer this low price by employing modern data mining and analytical tools to automate hull fouling detection.



## HULL MEDIC™

### Features:

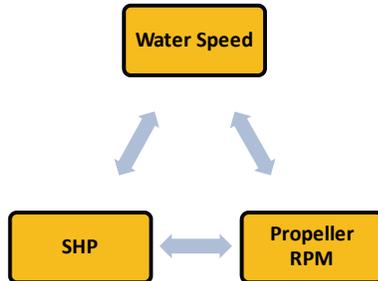
- Automatic data collection
- Uses propeller to measure:
  - Power penalty
  - Fuel penalty
  - Speed Loss
- Advanced database filtering
- Easy-to-understand reports

### Benefits:

- Reduce fuel consumption
- Maintain service speed
- Reduce GHG emissions
- Optimize cleaning intervals
- Evaluate paint effectiveness
- Quantify energy savings

\* Rate for 10 or more ships, 2 year subscription

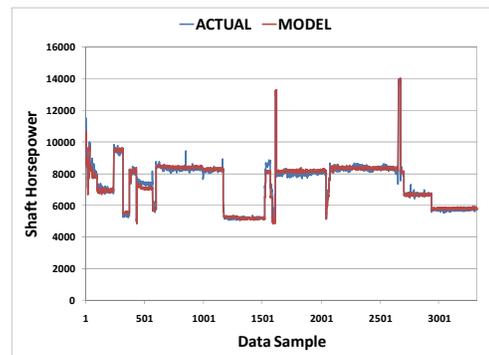
## High-accuracy condition monitoring technique Allows earlier detection for greater cost savings



Hull Medic calibrates each ship's propeller as a **power absorption dynamometer**.

The calibration uses actual ship performance measurements typically available aboard most vessels. The propeller modeling process establishes the mathematical relationship between three key ship performance variables: speed through the water, shaft horsepower, and propeller RPM.

The net result is an extremely accurate detection of hull fouling at the earliest possible time, allowing earlier maintenance action and more fuel savings.



Our hull fouling detection technique is described in professional journal publications and can be downloaded from our Web site. The technique is totally transparent and we have also published model accuracy results. Purchase our service - you know what you're getting upfront. No unknown correction techniques. Just fundamental principles of Naval Architecture - well documented, fully transparent, highly accurate.

Detecting hull fouling and taking action earlier in the fouling evolution allows you to eliminate fuel waste and clean your ship hulls at the optimal time, when the fouling is minor and cleaning time/costs are the lowest.

### HULL MEDIC - Cost-effect Hull Fouling Detection Service



**MACSEA Ltd.**  
Ship Health Monitoring Solutions