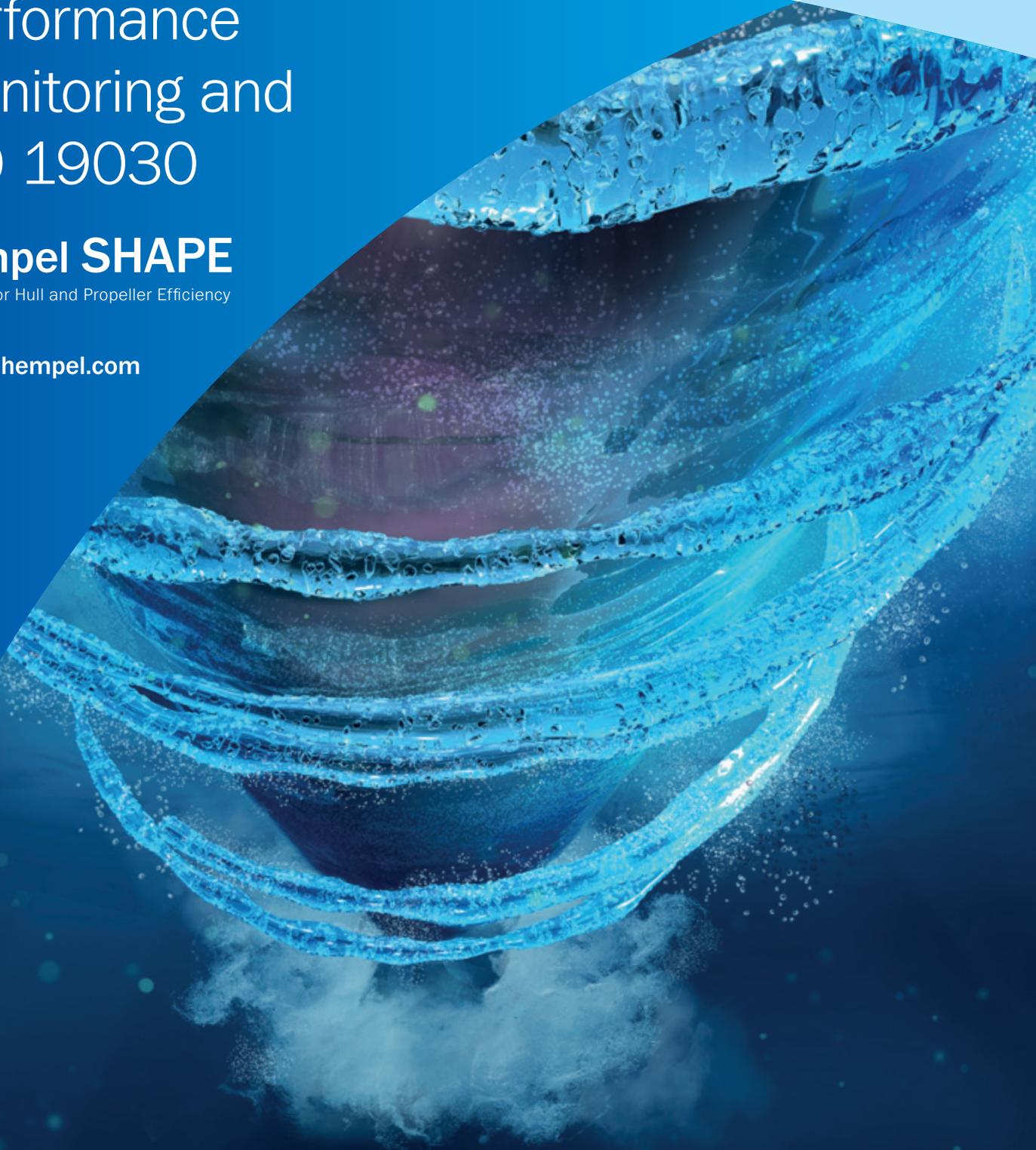


# Performance Monitoring and ISO 19030

## **Hempel SHAPE**

Systems for Hull and Propeller Efficiency

[SHAPE.hempel.com](http://SHAPE.hempel.com)



# Measurement of changes in hull and propeller performance

## ISO 19030 Quick Reference Guide

### The background

ISO 19030 is a new standard on performance monitoring. It has been developed to be widely acceptable by Shipbuilders, ship owners, engine manufacturers, coating companies, classification societies, the IMO etc. It enables ship owners and operators to compare hull and propeller solutions with simple and transparent data, that they can select the most efficient options for their vessels.

### The principle

Measuring how much more or less power is required to move the ship through water at a given speed.

### The required in-service data

- Autologged data (preferred)
- Noon data

### The method

-  Establish reference speed-power curves
-  Collect in-service data
-  Remove extreme conditions
-  Subtract the effect of environmental factors
-  Calculate speed loss
-  Calculate four performance indicators
-  Take fact-based decisions

#### Speed is related to power

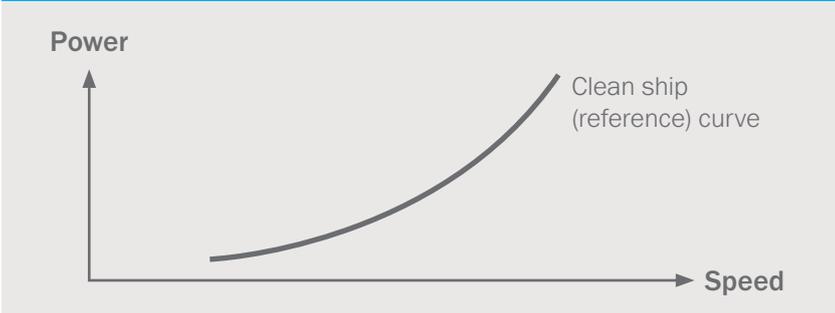


Fig A: Speed and power relation for clean ship



#### Performance loss is quantified in terms of speed loss

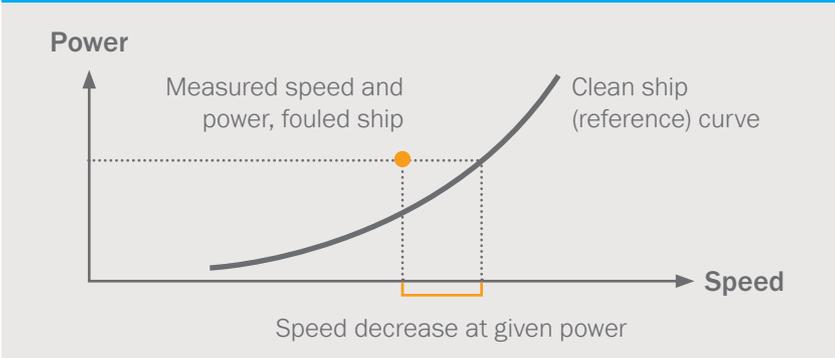


Fig B: Effect of hull/propeller fouling

### The four performance indicators



- 1. Dry-docking performance**  
Effectiveness of dry docking
- 2. In-service performance**  
Effectiveness of antifouling system
- 3. Maintenance trigger**  
When to carry out hull and propeller cleaning
- 4. Maintenance effect**  
Effectiveness of hull and/or propeller cleaning