

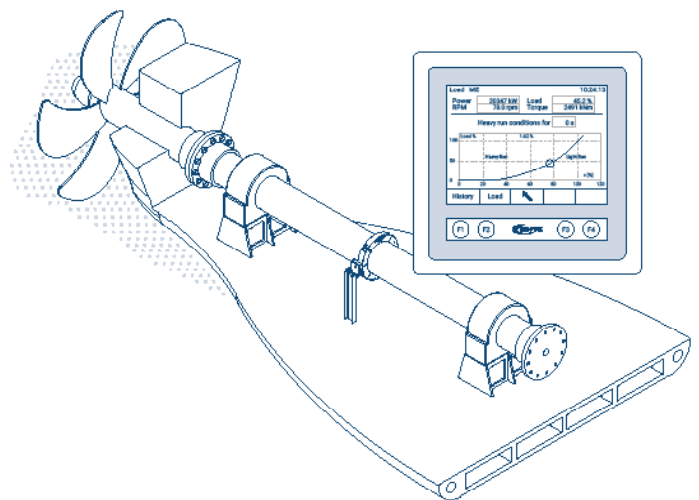
MAIHAK SHAFT POWER METER

Designed to Measure the Shaft Speed and Shaft Torsion of Sea-Going Vessels with Highest Accuracy and Repeatability

Hoppe offers a very compact and precise power measurement system that meets all requirements regarding upcoming emission savings. It is also the basis for the digitalisation of a fleet and for performance monitoring.

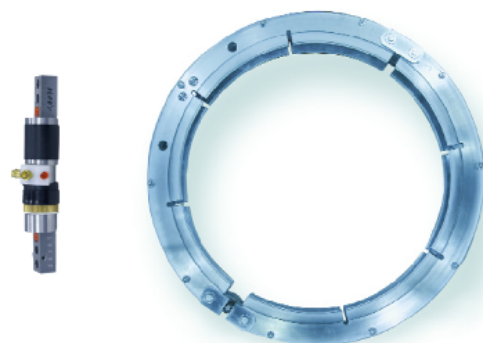
KEY FEATURES

- System with highest measuring accuracy ($< 0.5\%$ at all load levels)
- Calculates averages per hour, per day, and for a user-defined period
- Generates „heavy run alarm“ or „torque alarm“ with respect to the customer's settings
- Calibrated sensors with self-validation by software in operation
- Maintenance free and easy calibration by crew
- For solid and hollow shaft sizes $> 150 \text{ mm } \varnothing$ an speed up to 800 rpm



MEASURING PRINCIPLE

- Based on two acoustic vibrating wire sensors
- The sensors operate with a natural frequency of 600 Hz
- Due to their orientation, one sensor is stretched and the other is compressed when the shaft is twisted by torque
- In addition, the shaft rotation is measured with a gyroscope, an accelerometer and a Hall sensor
- The product of the mechanical torsion and the shaft speed is the shaft power
- The system is delivered fully calibrated from the factory



OUR PRODUCT RANGE

CONTROL SYSTEM

- Valve Remote Control
- Anti-Heeling
- FLUME Box Tank — Roll Damping
- INTERING U-Tank — Roll Damping
- Dock Control
- Floating Condition Control

MEASURING SOLUTIONS

- Tank Content Measurement
- Bunker Management
- Draught Measurement
- Dynamic Draught and Floating Monitoring
- Maihak Shaft Power Meter
- Maihak SHaPoLi
- Fuel Consumption Measurement
- Electronic Inclinator

INFORMATION SERVICES

- Performance Monitoring
- Crew Connect
- Fleet Connect

FLEET SERVICES

- Technical Support
- Spare Parts
- Service On Board
- Retrofit

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