

VESSEL PERFORMANCE

An evolving regulatory landscape and increasing pressure to reduce operational costs creates significant challenges for owners and operators leading to more focus on understanding and evaluating vessel performance.

Through benchmarking and analysis of vessel performance, ship owners and operators can achieve environmental compliance while reducing operational costs. Key Performance Indicators (KPIs) can be established to facilitate performance optimization.

ABS has taken an innovative approach to address these challenges to support both vessel performance and environmental compliance, enabling operators to:

- Improve fuel efficiency and reduce costs
- Enable crew to make critical operational decisions with visibility to real-time data on board
- Demonstrate charter party performance and compliance

To complete these activities, we can use data collected by a ship owner/operator. Alternatively, we can use an ABS in-house tool. The tool can be easily deployed across the fleet in a Cloud environment with minimal upfront investment, and can seamlessly integrate with a full range of ABS Nautical Systems Fleet Management software.

ABS VESSEL PERFORMANCE ANALYSIS SERVICES

Vessel performance services include the analysis and reporting of voyage information, machinery operating

parameters, hull and propeller inspection reports, and maintenance and cleaning events.

An analysis of an entire fleet provides comparative performance indicators and gives the owner and operator the data necessary to increase fuel efficiency and identify warning signs indicating potential machinery issues. Through monitoring and collection of data and reports on machinery and propulsion systems, operational decision making, system testing, and ship design, it is possible to get a holistic view of ship and fleet energy efficiency over time.

VESSEL PERFORMANCE CAPABILITIES

- **Model-based** – ABS leverages a ship-specific propulsion model which uses sea trial data and other relevant information to establish performance baselines to better predict performance. Leveraging a ship-specific model improves decision making by more accurately reflecting actual vessel operations.
- **KPI-driven Decision Support** – Based on the vessel model and analyses of regularly captured data, a set of KPIs for Vessel Performance are established to enable decision support both on



shore and aboard the vessel in the following areas:

- Hull and propeller performance
- Main engine condition
- Auxiliary engine/systems base load optimization
- Vessel/fleet benchmarking of performance
- Prediction/planning of fuel efficiency improvement measures
- **Compliance Support** – Operational profiles for fleet wide comparison, consumption overviews of shipboard components and further KPIs can be derived from data to assess operational efficiency, maintenance strategies and conformance to charter party requirements. Fuel consumption measurements and air emissions calculations are used to verify compliance with environmental regulations and contribute to an active SEEMP.