

## Environmental Management Solutions to Support Industry Regulations

**I**ncreasing regulations, higher fuel costs, uncertainty and volatility are additional pressures ship owners are facing today. In addition, maritime companies are required to comply with a number of new environmental regulations\*.

ABS Nautical Systems offers new solutions within the NS5 Enterprise platform that can satisfy the needs of the industry's energy and environmental focus.

### Energy & Environmental Software

The Energy & Environmental Manager provides a platform for effective, efficient and environmentally sound voyage management. It allows for the collection, analysis and reporting of a vessel's performance, efficiency, emissions and discharges. The software provides easy-to-use data entry forms that can be populated manually or automatically. The automated feature, powered by ESRR's OstiaEdge® software provides the capabilities to enable automated data collection for environmental compliance reporting, as well as fuel and energy management.

Business intelligence features allow the operator to click directly to the data at the component level. Customizable dashboards provide all personnel the same data for trending and analysis, leading to improved vessel and fleet performance.

The Energy & Environmental Manager also makes it possible to track and record key voyage related events including ballast activities, fuel and lube oil consumption, fuel oil switching and cargo information.

### Capabilities

- Facilitated and centralized collection of data
- Leverage shipboard automation/network systems allowing automated data capture
- Track, trend, report information necessary to satisfy environmental regulations
- Analysis and trending at ship and fleet levels
- Monitor emissions with CO<sup>2</sup> and SO<sub>x</sub> calculators
- Compile and record ballast water and fuel switching activities electronically



#### \*Regulations include

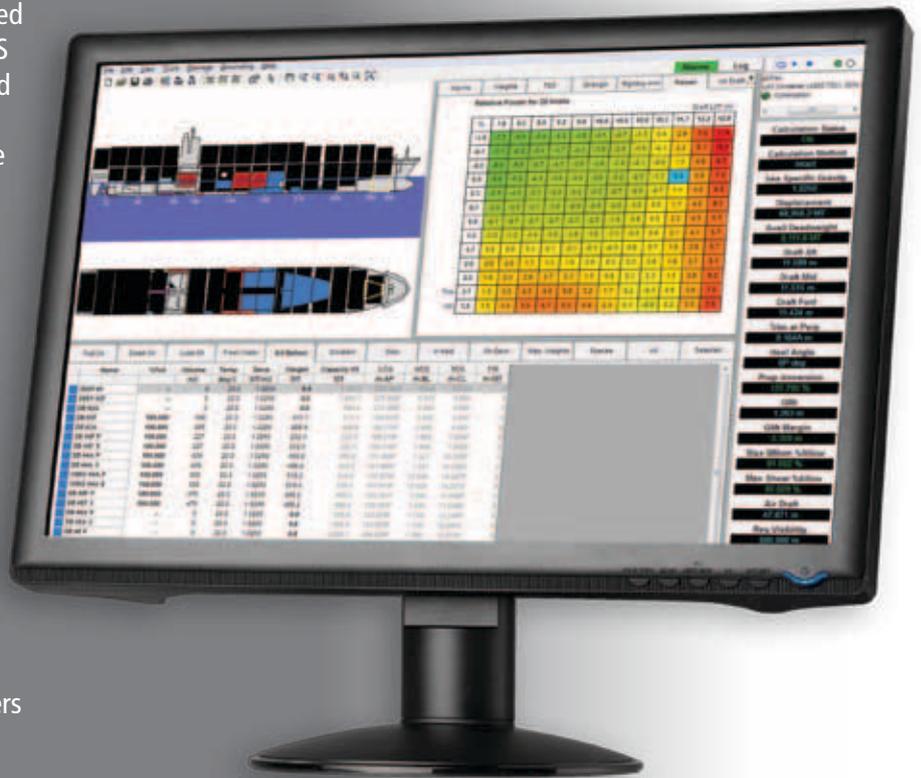
- MARPOL Annex VI – Fuel Switching (Regulation 14) and SEEMP (Regulation 22)
- Ballast Water Management Convention for Control and Management of Ships' Ballast Water and Sediments (BWM)

# Trim Optimization Tool

The trim optimization tool, offered in partnership with Herbert-ABS Software Solutions, LLC is based on trim and draft as a way to help with the fuel efficiency of a vessel. The applied method is to conduct model tests in calm water covering relevant speeds and drafts for the operational profile of each vessel class. This tool was developed to optimize within applicable regulatory bounds and assists the crew in finding the best trim for any combination of draft and speed.

## Capabilities:

- Integrated ship performance curves
- Push button optimization advice
- User-defined optimization parameters
- Auto ballast tool
- Auto cargo distribution
- State-of-the-art algorithms



## Improving Energy Efficiency: SEEMP

The Ship Energy Efficiency Management Plan (SEEMP) made mandatory by the International Maritime Organization (IMO) is a tool for shipowners and operators to use in outlining a program that continuously improves the energy efficiency of their vessels.

Starting as early as 1 January 2013, all shipowners and operators must identify and develop ship-specific energy efficiency measures for their vessels. This ship-specific plan can serve as an element when developing a broader Company Energy Efficiency Management Plan (CEEMP), which incorporates all measures of efficiency company-wide, both onshore and offshore.

The SEEMP can be thought of as a catalog of best practices that can be implemented on a particular vessel to improve its energy efficiency. Each ship-specific plan is to be monitored, updated and

improved upon frequently throughout the life of the vessel.

Recognizing that no two organizations are the same and that vessels operate under a wide-range of environmental and economic conditions, ABS provides shipowners and operators with a thorough understanding of the guidance offered by many industry organizations for developing an SEEMP. ABS can identify options to assist shipowners and operators in their efforts to incorporate the organizations' guidance that best suits their specific needs.

Drafting an energy efficiency plan follows a four-step process:

- Planning & Energy Efficiency Assessment
- Implementation
- Monitoring the Implemented Measures
- Self-evaluation and Improvement

# Developing Energy Efficiency Management Plans

**A**BS can support the development and implementation of the SEEMP and CEEMP by preparing the initial assessment and facilitating workshops to help operators select appropriate energy efficiency measures, as well as provide assistance in setting efficiency goals. As part of this process, ABS can assist operators in evaluating the technology options available to them and select a course of action best suited for their fleets.

During the workshops, ABS assists operators with:

- Setting a desired course of action
- Identifying best practices
- Investigating technology solution options
- Establishing goals, measurements and timelines
- Identifying responsible parties
- Developing specification requirements for system solutions

While implementation and plan monitoring is managed primarily by ship operators, ABS can work in close collaboration to provide guidance. ABS staff can constructively participate in the decisions made during the workshop, provide counsel on measurement techniques, and where appropriate, provide updates on available technology solutions that can impact implementation. ABS also can review the final SEEMP document and offer a Statement of Voluntary Compliance to demonstrate that it meets IMO Guidelines.

Once the plans are in place, ABS can provide operators with independent audit reviews of the results. At any time, ABS can review the data collection process, assist with measurement calculations and provide additional recommendations for improvements based on new technologies.



## Realize the Benefits

- Demonstrate compliance with environmental regulations
- Reduce crew burden with automated data capture and analysis
- Improve and support efficient environmental operations
- Enhance operational process while reducing costs

## Fleet Management Categories

### Maintenance Management

- Maintenance Manager
- Drydock
- Hull Inspection
- Hull Maintenance
- Drawings Management

### Supply Chain Management

- Purchasing & Inventory
- Interface Manager

### Workforce Management

- Crew Manager
- Crew Payroll

### Safety Management

- HSQE Manager
- Document Management
- Vetting
- Voyage Management

### Environmental Management

- Energy & Environmental
- Trim Optimization

## Standard Interfaces

- Invoicing
- eProcurement
- Accrual
- Commitments
- Budgeting
- Inventory Logistics Imports & Exports
- Barcode Scanning

## Consulting Services

- Project Management
- Process Mapping & Business Improvement
- System Implementations
- System Integration
- System Audits
- Embedded Staff

## Data Services

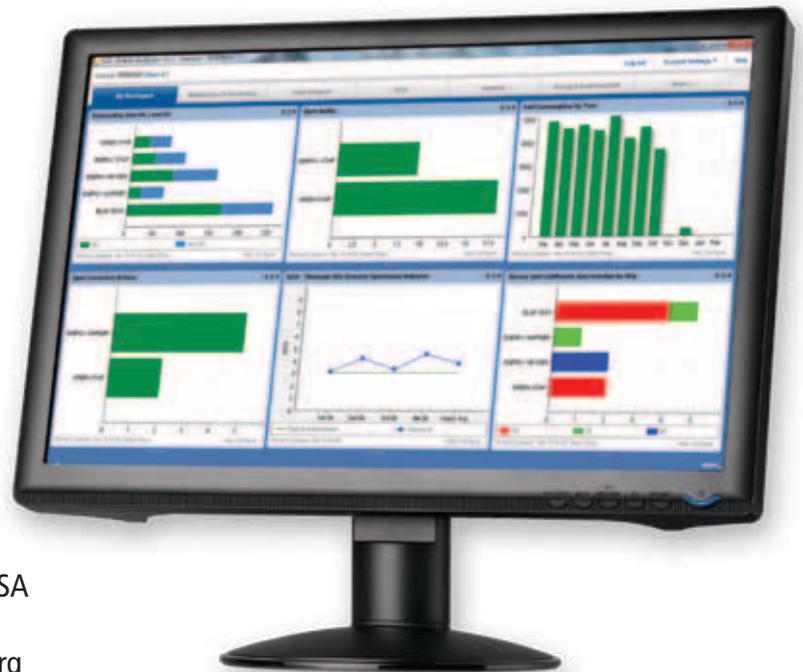
- Data Entry
- Interface with ABS Eagle Survey Status
- IMPA Catalog Subscription
- Data Conversions & Data Loads
- Database Creation & Development
- Data Cleansing

## Training Services

- End-user Training
- System Administration Training
- Management Training
- Boot Camp Style Training
- Train-the-Trainer Programs
- Customized Training Programs

## Information Management Services

- Custom Development Projects
- Dashboards & Business Intelligence Solutions
- Remote Hosting & System Administration



## For more information:

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