

# PRONOVA SYSTEMS Inc.

## Advanced Environmental Solutions

Introducing the Pronova Optifuel 1223 System for active-dynamic optimization of marine fuel consumption

**10.8%**

**13.1%**

### Pronova Systems OPTIFUEL 1223

| FUEL CONSUMPTION (GPH) | SHIP SPEED (KNOTS) | START/STOP OPTIMIZER | INITIAL SETUP          |
|------------------------|--------------------|----------------------|------------------------|
| 80.43                  | 08.87              | 09.08                | START STOP 08.87 08.27 |
| REQUIRED ACTION        |                    |                      |                        |
| NO ACTION              |                    |                      |                        |
| OPTIMAL SPEED          |                    |                      |                        |
| NO ACTION              |                    |                      |                        |

| FUEL CONSUMPTION DEVIATION FROM PROGRAM | SHIP DATA FROM DEPARTURE |
|---|--------------------------|
| 000.40                                  | 00086.43 32767 09.51     |

Increase your fuel savings today: 8 % to 20% reduction in fuel consumption is typical



## The Optifuel 1223 Solution

A real-time control system containing advanced algorithms that continuously calculates the Optimal Speed corresponding to the Minimum Fuel Consumption of the ship propulsion system.

Fuel Savings by:

- Optimal Speed Calculation;
- Bunkering management;
- Trim Optimization;
- Eliminates Human Factor in fuel losses;
- Eliminates ship-specific fuel losses;
- Load balancing across Engines and Propellers;
- Tide Synchronization;

Applicable for any type of ship propulsion  
(FPP and CPP propeller, Voith Schneider,  
Electrical Pods, etc.).



# Optifuel 1223 System

## Operational Features

SHIP OWNER (BY INTERNET)



- ❖ Profit Calculation and Maximization
- ❖ Daily Reporting of Fuel Optimization
- ❖ Monitoring, Reporting and Verification of GHG
- ❖ Preventive Maintenance planning and implementation
- ❖ Increase ship efficiency

DATA (ONBOARD)



SHIP FUEL SAVINGS

SHIP GHG REDUCTION

OPTIONAL FUNCTIONS

- Optimal Speed calculation and optimization;
- Optimal Trim calculation and optimization;
- Fuel Bunkering Management;
- Eliminates human error in fuel losses;
- Eliminates ship-specific fuel losses;
- Load balancing between
- main engines, propellers and diesel-generators;
- Tide Synchronization

- On-line measurement of GHG components: CO<sub>2</sub>, SOX, NOX;
- EEOI Calculation;
- Scrubber interface.

- Ballast water cleaning Control, Monitoring, Reporting and Verification;
- Used Water Treatment Control and Monitoring

Gain full visibility and control of the vessel's largest cost: fuel.



## Simplify Emissions Regulation Reporting

### **CO2 Monitoring, Reporting, Verification by:**

- Bunkering Delivery Notes
- Bunker Fuel Tanks Monitoring
- Mass Flow Meters
- Direct Emissions measurements

Additionally: NOX, SOX monitoring and reporting as per Marpol Annex VI

Features to increase ship profitability



Simplify Ballast Regulation Reporting

## BALLAST WATER MANAGEMENT SYSTEM

- Ballast water exchange management;
- Ballast water control and monitoring;
- Ballast water internet reporting;
- Ballast water treatment monitoring and reporting

Features to increase ship profitability



Proven Marine Environmental Solutions

## Ease of Installation & Maintenance

- The system is designed to work on-line or off-line.
- Installation is done without interrupting the ship operation and does not require changes to the existing shipboard systems.
- Installation can be done while the ship is in operation mode.
- Standard interconnection to ships' diesel propulsion plant, GPS, voyage management system, etc.
- The OPTIFUEL 1223 System is very-low maintenance.

Routine maintenance is easy and low cost.



## Value Oriented Solutions for All types of ships

Business Case Example:  
A container ship ....

- Fuel consumption: 10,000 MTs of fuel per year
- Cost: \$500 /MT of fuel
- Fuel Savings: 1,000 MTs of fuel saved per year (10% savings)
- Cost savings: \$500,000 in annual savings



System payback typical in 9 -15 months.



## OPERATION FUNCTIONS:

- Internet access to ship data;
- Daily automatic reporting;
- Operator access from the office (control at any time, from anywhere);
- Reports for the last hour, day, month (as required by the ship operation);
- Troubleshooting by Internet;
- Torque and Power direct measurement and integration with Hillhouse ShaftMaster Power/Torque meter to measure directly the Specific Fuel Oil Consumption of Main Engines
- Online Main Engine Performance Monitoring

Gain full visibility and control of the vessel's largest cost: fuel.





Proven Marine Environmental Solutions

## OPTIONAL FUNCTIONS

- Profit calculation and maximization
- Just-in-time arrival
- Scrubber interface
- Power, Torque, RPM measuring of main engines
- Prevents fuel theft;
- No need for periodic tuning;
- Reporting by Internet of ship data

Features to increase ship profitability

Contact us today:

Pronova System's Authorized Distributor:

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