



HAMMONIA
REEDEREI

HAMMONIA Reederei

INTERMARINE R-Type Optimization Project
- A brief summary -



Bow and Rudder Optimization

Before



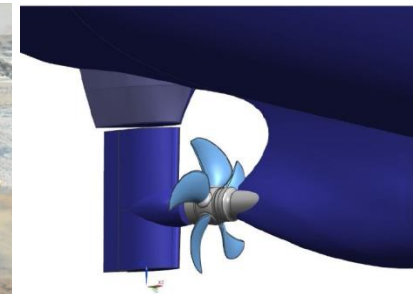
After



New Rudder Bulb



Engineering Design



Increased Vessel Flexibility and ECA Endurance

- MGO tank capacity doubled
- HFO tanks separated (bunker type flexibility ULS HFO and HFO)
- Fresh water capacity doubled

All of above without reducing cargo carrying or heavy lift capabilities

DNV GL Validated Performance

- “Modification Excellence Assessment Survey Report” (issued on 01.04.2016)

The report validates the guaranteed performance based on analysis of measured data before and after the modifications on all four sister vessels

- New fuel consumption at **CP conditions**:
 - 19,6 mton HFO (22% reduction)
- New fuel consumption based on **actual operational profile**:
 - Reduced from 26,5 to 19,6 mton (26% reduction)

Savings per Ship :

$$25.99\% \cdot \frac{300\text{USD}}{\text{ton}} \cdot 26.52 \frac{\text{tons}}{\text{day}} \cdot 212 \frac{\text{days}}{\text{year}} = 438,366 \frac{\text{USD}}{\text{year}}$$

CWR* Grant for Continuous Fuel Efficiency

- \$120,000 for the installation of continuous monitoring equipment

* CWR: Carbon War Room is an international non-governmental organization (NGO) and think tank working on issues regarding market-based solutions to climate change



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