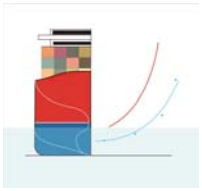
## New SPA JIP cuts fuel bills!

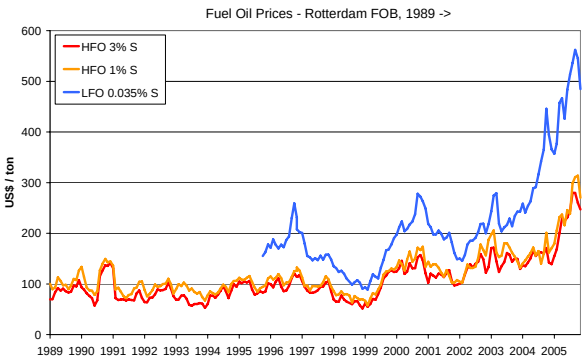
# Ship Service Performance Analysis



## Background

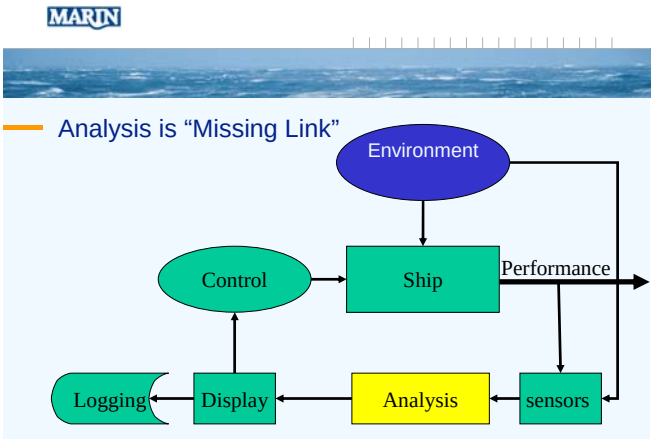
After completing the Sea Trial Analysis Joint Industry Project, MARIN is now starting a JIP to reduce fuel costs - the Service Performance Analysis (SPA) project. The high level of fuel oil prices and the increasing restrictions on exhaust gas emissions have urged ship owners and operators to look into reduction of fuel consumption while maintaining schedule integrity.

From fleet comparisons it is known that the fuel consumption of sister ships on the same trade may vary up to 10%. Optimum trim, routing, speed control, autopilot and propeller pitch setting and propeller cleaning, can reduce fuel bills by more than 5%.




## Objectives

- Develop method for speed-power performance analysis for service conditions.
- Base input on available data & sensors (VDR, ER CM); Specify standard for performance monitoring.
- Reduce data & present meaningful results to crew in order to assist them in fuel reduction.
- Connect to existing ship-shore communication to relay data to ship owner offices for fleet comparison.




## Scope

Present day ships are already equipped with advanced sensors for engine room condition monitoring and data recording (VDR), so the SPA project takes advantage of this data and develops a method for analysing the vessel performance in service conditions. Sea trial performance will be used as a benchmark and also a fleet performance comparison will be made. Importantly, SPA will also assist the crew to navigate the vessel more economically.

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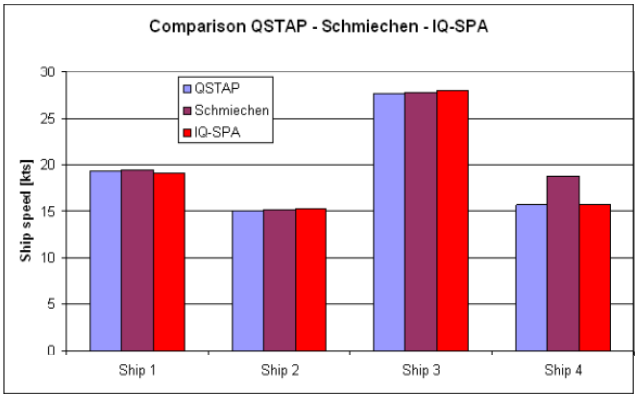
The following tasks are conducted:

- VDR data analysis 10 ships
- Economy
- Performance Analysis Modelling
- Interfacing on board (GPS, VDR, ER Condition Monitoring)
- Ship shore data transfer
- Data reduction & display
- Demonstration on 4 vessels for 1 year
- Implementation Plan




## Deliverables

- SPA method
- Standard for interfaces with VDR, Engine room condition monitoring
- SPA Software
- Validation & Demonstration results

## Benefits

With the SPA results, participating companies will obtain a standard and software tool for continuous performance monitoring on board their ships. The tool can be used to optimise the ship's operation (e.g. ballast, trim, routing, speed setting), to improve the ship systems (e.g. auto pilot, CPP pitch setting) and to plan maintenance on hull, propellor and engine room. By comparing the results with the speed trial results and those of other ships in the fleet, the crew will be motivated to cut fuel costs. Moreover, participating companies will derive valuable feed back for future ship and propulsion design.

## Project organisation

In order to have technical input and to share results and costs, SPA is conducted as a joint industry project open to ship owners, operators, yards and equipment suppliers. The project will run for two years.

## Schedule

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| October 2006; | signing of Participation Agreements |
| November 2006; | start of SPA JIP |
| December 2008; | completion of SPA-JIP |

## Full proposal

Ship owners and operators as well as yards and marine equipment suppliers are invited to participate in the SPA-JIP.

The full SPA JIP Proposal is available on request.

For more information on the SPA-JIP please contact MARIN Trials & Monitoring;
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