

The MOTORSHIP Propulsion honore de l'AWARD de cette année le "GATE RUDDER" présenté par notre commettant Stone Marine Propulsion (SMP), Mr Adrian Miles.

<https://www.propulsionconference.com/latest-news101/conference-exclusive-win-this-years-motorship-award>

Il y a 6 mois, SMP publiait l'article suivant suite aux premiers essais grandeur nature (que l'on peut également retrouver sur "The Motorship")

<https://www.motorship.com/news101/ships-and-shipyards/new-ducted-propeller-design-offers-fuel-savings>

Gate Rudders

14% reduction in fuel consumption in official tests but up to 25% reduction in service when compared with an identical vessel operating on the same routes! These impressive figures are the main reason our new Gate Rudders are one of the most remarkable advances, if not the most remarkable advance, in propulsion technology since the invention of screw propellers nearly 200 years ago.

The Gate Rudders are a patented device which has been developed with Dr Noriyuki Sasaki, Strathclyde University and a Japanese Consortium. As part of the development program two otherwise identical ships have been built, the Shigenobu and the Sakura. The Shigenobu is fitted with the Gate Rudders while her sister ship has a standard flap rudder.

Shigenobu



Sakura



Computer modelling had already produced impressive enough results for the building of the first vessel with Gate Rudders to be approved but it was not until the in service data became available that the designers realised just how great the improvement would be on similarly equipped vessels.

It was expected that replacing a flap rudder with a Gate Rudder, which perhaps should be called a 'ducted propeller system', rather than a rudder transformed the performance of the Shigenobu in more ways than just her reduced fuel consumption and emissions. So many ways in fact that some ship owners would probably consider fitting them even if the reduction in fuel consumption was significantly less. Among the additional benefits:-

- Acts as a powerful stern thruster greatly improving manoeuvrability, and reducing any requirement for tugs when docking or departing.
- The ability to enter or leave port safely in worse weather than most vessels with a conventional rudder.
- Significantly better and more stable steering in heavy weather compared with a flap rudder equipped ship.
- Considerable improvement in stability when stopping or going astern.
- Reduces noise and vibration.