

WORKPACKAGES



The completion of GATERS will be tackled by the tasks to be conducted in eight Work Packages (WPs) over this three-phases work programme:

WP1	Development of the best design and analysis procedures for the GRS
WP2	Full-scale trials and voyage monitoring of target ship
WP3	Detailed design of the GRS for the target ship
WP4	Manufacturing of the GRS components and installation on the target ship
WP5	Impact assessment of the GRS on the existing and forthcoming regulations
WP6	Life Cycle Cost (LCC) analysis of retrofitting a GRS
WP7	Communication, dissemination, and exploitation activities
WP8	Project administration and management



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GATE RUDDER SYSTEM AS A RETROFIT FOR THE NEXT GENERATION PROPULSION AND STEERING OF SHIPS



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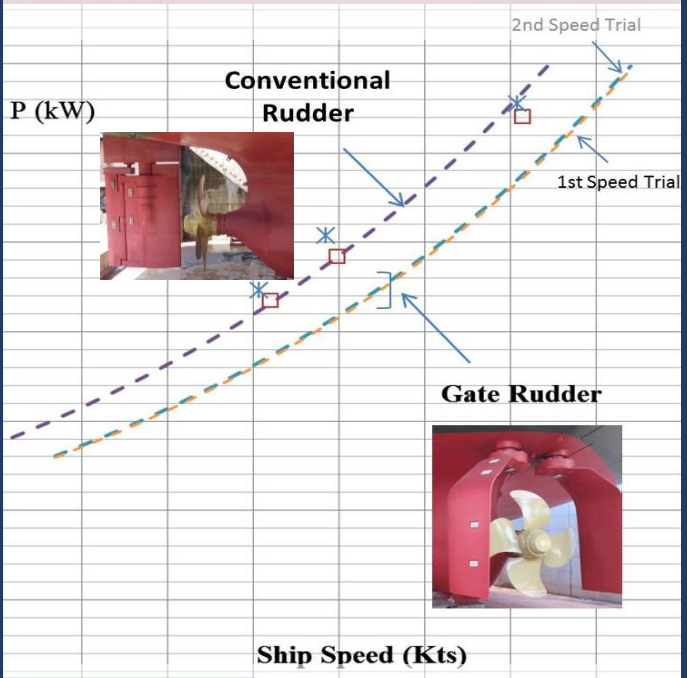
For more information please visit:

<https://www.gatersproject.com/>



SUMMARY

GATERS proposes the first retrofit application of a novel propulsion and manoeuvring device for ships, called **Gate Rudder System (GRS)**. Taking advantage of the remarkable fuel saving (max of 14% in trials and 30% in-service) and excellent manoeuvrability of the gate rudder system, GATERS demonstrates significantly reduced emissions from ships particularly within coastal and port areas to challenge and even exceeding the current and future legislative requirements of the IMO and local regulations for emissions.



OBJECTIVES

GATERS aims to bring together 18 technology experts and prime stakeholders, including the patent holder, across 9 countries to demonstrate and exploit the benefits of this system by two complementary deliverables:

- The retrofit demonstration of the system for the European short sea shipping operations by installing and operating on a target coastal tanker.
- The concept exploration of this system for the oceangoing shipping operations, including fleet level.

Hence to demonstrate if the GRS can be the next generation propulsion and steering system for the waterborne transport.



BENEFITS

The major benefits brought by GATERS are expected:

- Environmental:**
 - Retrofit solutions will reduce SOx, NOx and PM pollution from waterborne transport, particularly around ports, terminals, urban and coastal regions.
 - Enable integration of large high power marine fuel cells into ship design and demonstrate their feasibility, cost-effectiveness and identify technical barriers to adoption.
 - Significantly, increase the take up of retrofit emission reduction solutions in existing vessels.
- Ship Steering and Operation**
 - Superior Steering
 - Comfort Operation: Reduction of noise and vibration
 - Shorelines and Seabed Friendly: Low Wash
 - Safe Operation-Performance in waves
 - Remarkable energy saving

WORK PLAN

The GATERS is a three-phase work programme, i.e. Phase-1; Phase-2; Phase-3, which corresponds to the 1st, 2nd and 3rd year of the project, respectively:

Phase-1: The investigation of the technical challenges and solutions

Phase-2: The detailed design and manufacturing of the retrofit system on the target coastal vessel

Phase-3: The demonstration of the retrofit technology on the target vessel and its impact assessment comprising other ship types

