

TASK 7.1: Internal measures

Objectives

- Chemical and physical characterization of the particulate emission of a 2-stroke and 4-stroke marine diesel engine
- Identification of influence of operating conditions and parameters as well as of fuel quality on particulates.

Final Results & Achievements:

- Particulate emissions of a 2-stroke and 4-stroke engine were characterized in terms of physical and chemical properties.
- The attempt to reduce particulate emissions by internal means to a significant extent was not successful due to the influence of engine parameters turning out to be too small. Fuel oil quality influenced the amount of emitted particle mass.
- Correlation with after-treatment technologies investigated in Task 8.1 yielded that up to date no after-treatment method is available that reduces particulate emissions to an extent known from passenger car diesel engines.

Partners:



EMPA measuring equipment (on top: control unit, middle: heating unit for thermomixer (TD) and flow control, bottom: Differential Particle Analyzer (DMA) and 2 Condensation Particle Counters (CPC))