



Maritime DTU
Center for Maritime Activities

Implementation of SHIP-DESMO in MATLAB

Type of project: MSc or BSc

Project description:

SHIP-DESMO is a computational tool (Kristensen, 2017) primarily intended for calculation of the energy demand and associated fuel consumption, including exhaust gas emissions, for container ships with a capacity of 500 to 20,000 TEU (Twenty feet Equivalent Unit). SHIP-DESMO exists in an Excel version only, but this project should implement the tool into the MATLAB environment (and possibly into the Python environment too). In connection with the implementation, validation should be conducted with the 'original' Excel-based version. Moreover, the tool should subsequently be examined using in-service measurements from in-service ships, where focus will be on comparisons between *measured* and *predicted* power and possibly also fuel consumption; noting that the in-service measurements include data of shaft power, GPS, rudder movement, speed-through-water, draught, wind, and many other sensors and sources.

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Other possible partners: Maersk (DK), DFDS (DK)