Title (en)

PROPULSIVE POWER ESTIMATOR

Title (de)

ANTRIEBSLEISTUNGSSCHÄTZER

Title (fr)

ESTIMATEUR DE PUISSANCE DE PROPULSION

Publication

EP 4039579 A1 20220810 (EN)

Application

EP 21155512 A 20210205

Priority

EP 21155512 A 20210205

Abstract (en)

Methods and systems are disclosed for determining a power distribution of a propulsion system of a vessel with a propeller and a hull, the propulsion system comprising a plurality of power sources, preferably hybrid power sources, for powering one or more engines for driving the propeller. The method may comprise receiving a shaft speed set-point (302) defining a target rotational speed or target effective rotational speed of the propeller. The method may further comprise determining an advance ratio (306) of the propeller based on the received shaft speed set-point and one or more design parameters of the propeller and/or of the hull, determining a propeller torque parameter (310), preferably a propeller torque or a propeller torque coefficient based on the shaft speed set-point and the advance ratio, and determining a predicted load (312) based on the determined propeller torque parameter, the predicted load defining an estimated load of the propeller when rotating at the shaft speed set point. The method may further comprise determining a power distribution based on the predicted load. Determining a power distribution may comprise selecting a power source, the power distribution defining an amount of power to be delivered by each of the plurality of power sources.

IPC 8 full level

B63H 21/20 (2006.01); **B63H 21/21** (2006.01)

CPC (source: EP)

B63H 21/20 (2013.01); **B63H 21/21** (2013.01); B63H 3/10 (2013.01); B63H 21/17 (2013.01); B63H 2021/202 (2013.01)

Citation (applicant)

- EP 21155425 A 20210205
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- [A] EP 3412558 A1 20181212 - KAWASAKI HEAVY IND LTD [JP]
- [A] HASELTALAB ALI ET AL: "Predictive on-board power management for all-electric ships with DC distribution architecture", OCEANS 2017 - ABERDEEN, IEEE, 19 June 2017 (2017-06-19), pages 1 - 8, XP033236566, DOI: 10.1109/OCEANSE.2017.8084694

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

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