

Title (en)

Retractable thruster for vessels

Title (de)

Abschwenkbares Strahlruder für Schiffe

Title (fr)

Propulseur rétractable pour vaisseaux

Publication

**EP 1876094 A2 20080109 (EN)**

Application

**EP 07109804 A 20070607**

Priority

- EP 06116730 A 20060706
- EP 07109804 A 20070607

Abstract (en)

A thruster device provides thrust for moving a vessel. A thruster unit (1) has a propeller (8) for generating the thrust and a compact power system (9,10) for providing power to rotate the propeller. A compact retractor assembly moves the thruster unit between a recessed position and an operational position. The thruster unit (1) has a piston element (3), and the retractor assembly comprises a housing (2) having an inner space (21) for receiving the piston element. The inner space receives a pressure fluid (24) for applying a hydraulic pressure on the piston element for the moving of the thruster unit. The propeller has an outer ring (80). The outer ring has a sequence of magnets (9) cooperating with coils (10). A coil current provided by a power control unit generates a magnetic force on the sequence of magnets to rotate the propeller.

IPC 8 full level

**B63H 25/42** (2006.01); **B63H 21/17** (2006.01); **B63H 23/24** (2006.01)

CPC (source: EP)

**B63H 1/16** (2013.01); **B63H 25/42** (2013.01); **B63H 2023/005** (2013.01); **B63H 2025/425** (2013.01)

Citation (applicant)

US 4294186 A 19811013 - WARDELL GERALD S

Cited by

CN103192970A; DK178129B1; EP2591993A1; CN103085959A; CN116279967A; US8894453B2; US8956195B2; WO2015172788A1; WO2014052531A1; EP2548797A1; EP2757037A1; WO2022050850A2; US9260173B2; EP3717346B1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK YU

DOCDB simple family (publication)

**EP 1876094 A2 20080109; EP 1876094 A3 20080319**

DOCDB simple family (application)

**EP 07109804 A 20070607**