

Title (en)

Ship propulsion unit with a propeller placed underneath the hull bottom, which is preferably totally flat, or just in the area of the propulsion unit

Title (de)

Schiffsantriebsanlage mit einem unter dem vorzugsweise im wesentlichen oder in Bereich der Antriebsanlage ebenen Schiffsboden angeordneten Antriebspropeller

Title (fr)

Installation de propulsion marine avec une hélice placée au dessous de la coque, dont le fond est de préférence totalement plat, ou dont le fond est plat aux environs de l'installation de propulsion

Publication

**EP 0613817 B1 19970502 (DE)**

Application

**EP 94102988 A 19940228**

Priority

DE 4306323 A 19930301

Abstract (en)

[origin: EP0613817A1] The propeller (5) can be retracted behind the plane of the hull bottom into a shaft (8). When the propeller (4) is retracted into it, the shaft (8) can be closed lid-like in the plane of the hull bottom (1) by a plate (10). The shaft (8) can preferably be closed water-tight by the plate (10), the water trapped in the closed shaft can preferably be pumped out, and the shaft (8) pumped empty is preferably accessible through a manhole (18) in a top shaft cover (9) for inspection and maintenance work at the propeller (4), the manhole in turn being closable by a cover (19).  
<IMAGE>

IPC 1-7

**B63H 5/12**

IPC 8 full level

**B63H 20/00** (2006.01); **B63B 17/00** (2006.01); **B63H 5/125** (2006.01); **B63H 25/42** (2006.01); **F16J 15/46** (2006.01)

CPC (source: EP US)

**B63B 17/0018** (2013.01 - EP US); **B63H 25/42** (2013.01 - EP US); **B63H 2025/425** (2013.01 - EP US)

Cited by

CN102341301A; EP2403749A4; EA022483B1; US6375524B1; US8715021B2; WO9920524A1; WO2010100313A1

Designated contracting state (EPC)

AT BE DE DK ES FR GB GR IE IT NL PT SE

DOCDB simple family (publication)

**EP 0613817 A1 19940907**; **EP 0613817 B1 19970502**; AT E152407 T1 19970515; CA 2116610 A1 19940902; CN 1095681 A 19941130; DE 4306323 A1 19940908; DE 59402573 D1 19970605; DK 0613817 T3 19970728; ES 2102704 T3 19970801; FI 940943 A0 19940228; FI 940943 A 19940902; GR 3024085 T3 19971031; JP H06316289 A 19941115; NO 940687 D0 19940228; NO 940687 L 19940902; US 5397255 A 19950314

DOCDB simple family (application)

**EP 94102988 A 19940228**; AT 94102988 T 19940228; CA 2116610 A 19940228; CN 94102541 A 19940301; DE 4306323 A 19930301; DE 59402573 T 19940228; DK 94102988 T 19940228; ES 94102988 T 19940228; FI 940943 A 19940228; GR 970401735 T 19970710; JP 2952894 A 19940228; NO 940687 A 19940228; US 20296694 A 19940228