

Title (en)
COMPACT WATER-JET PROPULSION AND STEERING SYSTEM

Title (de)
KOMPAKTES WASSERSTRAHLANTRIEBS UND -LENKSYSTEM

Title (fr)
SYSTEME COMPACT DE PROPULSION ET DE DIRECTION PAR JET D'EAU

Publication
EP 1508516 A4 20060913 (DE)

Application
EP 03747547 A 20030428

Priority
• RU 0300199 W 20030428
• RU 2002112283 A 20020506

Abstract (en)
[origin: RU2205774C1] FIELD: shipbuilding; development of water-jet propulsors with reverse steering complex. SUBSTANCE: proposed complex includes water duct, impeller with hub fairing mounted on shaft with bearings, straightening set and reverse steering unit with swivel deflector mounted after nozzle. Cross sections of nozzle have shape elongated in horizontal direction after inlet circular section of nozzle. Ratio of width to height is equal to 2:10. Profile of cross sections of impeller hub copies profile of cross sections of inner loop of nozzle. Straightening set is formed by nozzle walls, fairing and profiled struts. Reversible steering unit is provided with limiting plate and two drive rudders. Side walls of cross section of nozzle have form of part of circle after inlet circular section and upper and lower walls are limited by chords of segments. Circular shape of nozzle section changes to outlet section elongated horizontally. Profile of impeller fairing is transformed into horizontal line at nozzle outlet. Impeller hub fairing is secured to nozzle walls by means of four streamlined profiled struts. Side walls of deflector have through holes. Rudders have profile of straight-cheek wedges. One bearing of tail section of impeller shaft is made in form of supporting bearing and other bearing is made in form of thrust bearing; bearings are lubricated with water. EFFECT: reduced sizes of propulsor; enhanced efficiency; minimization of loads; facilitated procedure and enhanced ecological safety. 9 cl, 2 dwg

IPC 1-7
B63H 11/08; **B63H 11/10**; **B63H 11/103**; **B63H 11/11**

IPC 8 full level
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CPC (source: EP KR)
B63H 11/08 (2013.01 - KR); **B63H 11/10** (2013.01 - EP KR); **B63H 11/103** (2013.01 - EP KR); **B63H 11/11** (2013.01 - EP KR)

Citation (search report)
• [Y] US 5244425 A 19930914 - TASAKI HIROSHI [JP], et al
• [Y] US 4449944 A 19840522 - BAKER KENNETH R [US], et al
• [Y] US 6273768 B1 20010814 - BLANCHARD CLARENCE E [US]
• [Y] FR 1358662 A 19640417 - TWIN DISC CLUTCH CO
• See references of WO 03093103A1

Designated contracting state (EPC)
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DOCDB simple family (publication)
EP 1508516 A1 20050223; **EP 1508516 A4 20060913**; CN 100497083 C 20090610; CN 1652971 A 20050810; KR 100751846 B1 20070824; KR 20050018673 A 20050223; RU 2205774 C1 20030610; WO 03093103 A1 20031113

DOCDB simple family (application)
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