Title (en)

Rudder for ships

Title (de)

Ruder für Schiffe

Title (fr)

Gouvernail pour bateaux

Publication

EP 2060484 B2 20190821 (DE)

Application

EP 07024061 A 20071212

Priority

DE 202007015941 U 20071113

Abstract (en)

[origin: US2009126613A1] A rudder for ships comprising a rudder blade which has a leading edge and a trailing edge. The rudder blade has two superimposed rudder blade sections, the leading edge sections and/or the trailing edge sections of which are offset such that the one leading edge section and/or the one trailing edge section is offset port or starboard and the other leading edge section and/or the other trailing edge section is offset starboard or port and that the one leading edge and/or trailing edge section has a port-sided offset surface which projects over the other leading edge section and/or the other trailing edge section and the other leading edge section and/or trailing edge section has a starboard-sided offset surface which projects over the one leading edge section and/or trailing edge section, a flow body configured in such a manner that its dimensions are adapted to the dimensions of the offset surfaces, which covers the offset surfaces and which is configured in the area of each offset surface.

IPC 8 full level

B63H 25/38 (2006.01)

CPC (source: EP KR US)

B63H 25/38 (2013.01 - EP KR US); B63H 2025/388 (2013.01 - EP US)

Citation (opposition)

Opponent :

- KR 20010009112 A 20010205 - SAMSUNG HEAVY IND [KR]
- EP 0527270 A1 19930217 - HITACHI SHIPBUILDING ENG CO [JP]
- JP S5830896 A 19830223 - ISHIKAWAJIMA HARIMA HEAVY IND
- WO 2005113332 A1 20051201 - BECKER MARINE SYS GMBH & CO KG [DE], et al
- US 5415122 A 19950516 - SHEN YOUNG T [US]
- US 1844303 A 19320209 - RUDOLF WAGNER
- DE 583091 C 19330828 - RUDOLF WAGNER DR
- <<<N O N - C I T E D D O C U M E N T>>> Auszug aus dem Jahrbuch der Schiffsbautechnischen Gesellschaft 1929 S. 195-256
- <<<N O N - C I T E D D O C U M E N T>>> Heinke H.-J.: "Das Ruder im Focus von Forschung und Entwicklung in der Schiffbau-Versuchsanstalt Potsdam", 14.SVA-Forum, Potsdam, 7. November 2007

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)

HR

DOCDB simple family (publication)

US 2009126613 A1 20090521; **US 7802531 B2 20100928**; AT E498547 T1 20110315; CN 101434294 A 20090520; CN 101434294 B 20121010; CN 101531248 A 20090916; CN 101531248 B 20111130; CN 101531249 A 20090916; CN 101531249 B 20111130; DE 202007015941 U1 20080117; DE 202007017448 U1 20080228; DE 502007006513 D1 20110331; DK 2060484 T3 20110606; DK 2060484 T4 20191118; EP 2060484 A1 20090520; EP 2060484 B1 20110216; EP 2060484 B2 20190821; ES 2361440 T3 20110617; ES 2361440 T5 20200413; HK 1129639 A1 20091204; HR P20110353 T1 20110630; HR P20110353 T4 20200110; JP 2009120170 A 20090604; JP 4841578 B2 20111221; KR 101281977 B1 20131127; KR 101433465 B1 20140822; KR 20090049514 A 20090518; KR 20120125446 A 20121115; PL 2060484 T3 20110831; PL 2060484 T5 20210802; SG 152963 A1 20090629; TW 200920656 A 20090516; TW I352677 B 20111121

DOCDB simple family (application)

US 7034608 A 20080214; AT 07024061 T 20071212; CN 200810093028 A 20080415; CN 200810189550 A 20081112; CN 200810189551 A 20081112; DE 202007015941 U 20071113; DE 202007017448 U 20071212; DE 502007006513 T 20071212; DK 07024061 T 20071212; EP 07024061 A 20071212; ES 07024061 T 20071212; HK 09107784 A 20090825; HR P20110353 T 20110512; JP 2008056222 A 20080306; KR 20080030871 A 20080402; KR 20120119775 A 20121026; PL 07024061 T 20071212; SG 2008012452 A 20080214; TW 97105007 A 20080213