

Title (en)
BOILER STRUCTURE FOR VESSEL

Title (de)
KESSELSTRUKTUR FÜR KAMMER

Title (fr)
STRUCTURE DE CHAUDIÈRE POUR NAVIRE

Publication
EP 2224166 A4 20140514 (EN)

Application
EP 08778085 A 20080711

Priority
• JP 2008062570 W 20080711
• JP 2007324692 A 20071217

Abstract (en)
[origin: EP2224166A1] Provided is a marine boiler structure that is capable of remedying non-uniformity in corrosion progression by making the temperature distribution of combustion gas that passes through a superheater uniform, and that is also capable of reducing the level of NOx contained in the combustion gas. In a marine boiler structure configured such that combustion gas generated by combustion in a burner 3 flows from a furnace 2 through a superheater 5 and an evaporator tube bundle 6, a bottom air port 20 that supplies part of the combustion air as bottom air from a furnace bottom portion 2a of the furnace 2 is provided, the bottom air port 20 is positioned closer to the superheater 5 relative to a burner center line CL, and an ejecting direction of the bottom air is set within a range inclining in the burner direction from the vertically upward direction.

IPC 8 full level
F22B 21/08 (2006.01); **F22B 31/00** (2006.01); **F23C 5/08** (2006.01); **F23C 5/24** (2006.01); **F23C 7/04** (2006.01); **F23L 9/04** (2006.01)

CPC (source: EP KR US)
F22B 21/081 (2013.01 - EP US); **F22B 31/00** (2013.01 - EP US); **F22B 37/40** (2013.01 - KR); **F22G 5/04** (2013.01 - KR); **F23C 5/08** (2013.01 - EP US); **F23C 5/24** (2013.01 - EP US); **F23C 7/04** (2013.01 - EP US); **F23L 9/04** (2013.01 - EP US); **F23L 99/00** (2013.01 - KR)

Citation (search report)
• [X] JP 2002195504 A 20020710 - MITSUBISHI HEAVY IND LTD
• [X] US 3171390 A 19650302 - BLODGETT NORMAN S
• [X] US 3157163 A 19641117 - KUHNER MAX H
• See references of WO 2009078191A1

Cited by
EP3591291A4

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)
EP 2224166 A1 20100901; **EP 2224166 A4 20140514**; CN 101883951 A 20101110; CN 101883951 B 20140423; JP 2009145013 A 20090702; JP 5022204 B2 20120912; KR 101331645 B1 20131120; KR 20100087365 A 20100804; KR 20130099249 A 20130905; US 2010251945 A1 20101007; WO 2009078191 A1 20090625

DOCDB simple family (application)
EP 08778085 A 20080711; CN 200880118913 A 20080711; JP 2007324692 A 20071217; JP 2008062570 W 20080711; KR 20107012512 A 20080711; KR 20137021254 A 20080711; US 74625108 A 20080711