

Title (en)
Core structure of housingless-type oil cooler

Title (de)
Kernstruktur eines gehäuselosen Ölkühlers

Title (fr)
Structure de noyau pour refroidisseur d'huile sans enveloppe

Publication
EP 1790934 A2 20070530 (EN)

Application
EP 06125039 A 20061129

Priority
JP 2005343871 A 20051129

Abstract (en)
A housingless-type oil cooler (AA; BB) includes cooling elements (100) having first and second plates (11, 12) coupled with together, an oil return tube (6) vertically arranged through a core portion (1), and a heat-transfer suppressing means (20; 22; 24). The cooling elements (100) are piled up in a vertical direction of the core portion (1) to alternately form cooling water chambers (17) and oil chambers (15) so that the adjacent cooling water chambers (17) are fluidically connected through a cooling water passage (18a, 18b) and the adjacent oil chambers (15) are fluidically connected through an oil passage (16a, 16b). The oil return tube (6) discharges oil introduced from one side of the core portion (1) toward its other side through the oil chambers (15) and the oil passages (16a, 16b). The heat-transfer suppressing means (20; 22; 24) is arranged between the oil chambers (15) and the oil return tube (6) to prevent heat transfer between the oil flowing in the oil chambers (15) and the oil flowing in the oil return tube (6).

IPC 8 full level
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CPC (source: EP US)
F28D 9/0012 (2013.01 - EP US); **F28D 9/005** (2013.01 - EP US); **F28F 13/00** (2013.01 - EP US)

Cited by
FR2956479A1; WO2011098477A1

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

Designated extension state (EPC)
AL BA HR MK YU

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