

Title (en)

METAL SIDE-PLATE FOR A RADIATOR

Title (de)

SEITENBLECH FÜR KÜHLER

Title (fr)

TOLE LATÉRALE DE RADIATEUR

Publication

EP 1716378 B1 20080220 (DE)

Application

EP 05707143 A 20050202

Priority

- EP 2005001025 W 20050202
- DE 102004005177 A 20040202

Abstract (en)

[origin: DE102005004907A1] The radiator side plate (12), especially a tubular radiator in the cooling system for a vehicle internal combustion motor, is around the heat exchange surfaces (11). The side plate is structured to prevent thermal stresses through different thermal expansions between the side plate and the radiator (10) with weakened zones (13) for compensation on thermal expansion. The weakened zones are openings through the side plate material, or a grid of bars forming honeycomb openings.

IPC 8 full level

F28F 9/00 (2006.01)

CPC (source: EP US)

F28F 9/001 (2013.01 - EP US); **F28F 2265/26** (2013.01 - EP US)

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 MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 2005073661 A1 20050811; AT E386915 T1 20080315; BR PI0507276 A 20070626; CN 1914472 A 20070214;
DE 102005004907 A1 20050818; DE 502005002920 D1 20080403; EP 1716378 A1 20061102; EP 1716378 B1 20080220;
ES 2303224 T3 20080801; JP 2007519883 A 20070719; US 2007163751 A1 20070719

DOCDB simple family (application)

EP 2005001025 W 20050202; AT 05707143 T 20050202; BR PI0507276 A 20050202; CN 200580003585 A 20050202;
DE 102005004907 A 20050202; DE 502005002920 T 20050202; EP 05707143 A 20050202; ES 05707143 T 20050202;
JP 2006550144 A 20050202; US 58735705 A 20050202