

Title (en)

Radiator for motor vehicle heating system

Title (de)

Heizkörper für eine Heizungsanlage eines Kraftfahrzeugs

Title (fr)

Radiateur pour système de chauffage d'un véhicule à moteur

Publication

**EP 0707434 B2 20090506 (DE)**

Application

**EP 95113221 A 19950823**

Priority

DE 4436791 A 19941014

Abstract (en)

[origin: EP0707434A2] The heating body has a vane/tube block through which air to be heated is passed and which has at least one row of tubes (6) arranged between the vanes (7) so as to conduct heat. At least some of the tubes are in the form of PTC heating tubes (8) with envelope tubes with integrated PTC heating elements. The heating power of the PTC heating elements and the dimensions of the vanes enclosing the associated envelope tubes are matched to the heat absorbing capacity of the air flowing through the vanes. Each second tube in the block can be replaced by an envelope tube with a PTC tube with PTC heating elements.

IPC 8 full level

**H05B 3/14** (2006.01); **F24H 3/04** (2006.01); **H05B 3/50** (2006.01)

CPC (source: EP)

**F24H 1/009** (2013.01); **F24H 3/0405** (2013.01); **F24H 3/0429** (2013.01); **F24H 3/0435** (2013.01); **F24H 3/0447** (2013.01); **F24H 3/085** (2013.01); **F24H 9/1872** (2013.01); **H05B 3/14** (2013.01); **H05B 3/50** (2013.01); **H05B 2203/02** (2013.01)

Citation (opposition)

Opponent :

- JP S63203411 A 19880823 - NIPPON DENSO CO
- EP 0516112 A2 19921202 - YANG CHIUNG HSIANG [TW]
- EP 0243077 A2 19871028 - FORD MOTOR CO [GB], et al
- DE 3815306 A1 19891116 - EICHENAUER GMBH & CO KG F [DE]

Cited by

EP1457368A1; EP1527916A1; EP1429084A1; CN110945965A; DE10143852A1; DE10143852B4; DE10346827A1; DE10346827B4; DE19711031A1; DE19711031B4; DE10157399B4; EP0937595A3; EP3540326A1; WO2005051692A1

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