

Title (en)  
Heat exchanger

Title (de)  
Wärmeübertrager

Title (fr)  
Caloporteur

Publication  
**EP 2393336 A1 20111207 (DE)**

Application  
**EP 10290296 A 20100604**

Priority  
EP 10290296 A 20100604

Abstract (en)  
The heat exchanger (2) has a positive temperature coefficient (PTC) heating element (5) provided in a housing (1), where opposite sides of the heating element are arranged adjacent to contact plates (7, 7'). The heating element and the contact plates are glued with one another to form a pre-mounted component (8). The housing is made of electrically conductive material i.e. aluminum, and designed as an extruded pipe. U-shaped insulations (10, 10') are provided between an inner wall (9) of the housing and one of the contact plates. Position profiles (11, 11') are attached at the insulation.

Abstract (de)  
Die Erfindung betrifft einen Wärmeübertrager (2), insbesondere elektrischer Zuheizier für ein Kraftfahrzeug, welcher ein Gehäuse (1) aufweist, in welchem zumindest ein PTC-Heizelement (5) angeordnet ist, welches auf gegenüberliegenden Seiten jeweils an ein Kontaktblech (7, 7') angrenzt, wobei das zumindest eine PTC-Heizelement (5) und die auf den gegenüberliegenden Seiten angrenzenden Kontaktbleche (7, 7') miteinander verklebt sind, um so eine vormontierte Baueinheit (8) zu bilden.

IPC 8 full level  
**H05B 3/50** (2006.01)

CPC (source: EP)  
**H05B 3/50** (2013.01); **H05B 2203/02** (2013.01)

Citation (applicant)  

- EP 1916873 B1 20090429 - CATEM GMBH & CO KG [DE]
- EP 2109345 A1 20091014 - EBERSPAECHER CATEM GMBH & CO K [DE]
- EP 1768459 A1 20070328 - CATEM GMBH & CO KG [DE]
- EP 1768458 B1 20080514 - CATEM GMBH & CO KG [DE]
- EP 1768457 B1 20080514 - CATEM GMBH & CO KG [DE]

Citation (search report)  

- [XYI] US 2008173637 A1 20080724 - TAGUCHI KOSHIRO [JP]
- [I] EP 1182908 A1 20020227 - CATEM GMBH & CO KG [DE]
- [Y] EP 2190256 A1 20100526 - BEHR FRANCE ROUFFACH SAS [FR]
- [A] FR 2826829 A1 20030103 - VALEO CLIMATISATION [FR]
- [A] EP 1657963 A1 20060517 - DBK DAVID & BAADER GMBH [DE]

Cited by  
EP2731400A1; EP4333558A1; US10136474B2; DE102012107985B4; DE102012013770A1; EP2608633A1; US9338831B2; EP2933577B1; EP2873296B1

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

Designated extension state (EPC)  
BA ME RS

DOCDB simple family (publication)  
**EP 2393336 A1 20111207; EP 2393336 A8 20120215; EP 2393336 B1 20170517**

DOCDB simple family (application)  
**EP 10290296 A 20100604**