

Title (en)
ELECTRIC HEATING DEVICE

Title (de)
ELEKTRISCHE HEIZVORRICHTUNG

Title (fr)
DISPOSITIF DE CHAUFFAGE ÉLECTRIQUE

Publication
EP 3101364 A1 20161207 (DE)

Application
EP 15170331 A 20150602

Priority
EP 15170331 A 20150602

Abstract (en)
[origin: US2016360574A1] An electric heating device including a heater housing in which a partition separates a circulation chamber, through which a medium to be heated can flow, from a connection chamber in which electrical connections of a PTC heating element introduced into a recess of a heating rib projecting from the partition into the circulation chamber are exposed. The PTC heating element has at least one PTC element and strip conductors lying against it at both sides, of which at least one strip conductor is covered by an electrical insulation layer. To create an electric heating device which permits a delivery of heat of the PTC heating element to the environment in an improved way, the heating rib is formed by a heating rib frame which comprises at least one window in which the insulation layer is exposed.

Abstract (de)
Die vorliegende Erfindung betrifft eine elektrische Heizvorrichtung mit einem Heizergehäuse, in welchem eine Trennwand eine von einem zu erwärmenden Medium durchströmbare Zirkulationskammer von einer Anschlusskammer trennt, in der elektrische Anschlüsse eines in eine Ausnehmung einer von der Trennwand in die Zirkulationskammer hineinragenden Heizrippe eingebrachten PTC-Heizelementes mit zumindest einem PTC-Element und beidseitig daran anliegenden Leiterbahnen freiliegen, von der zumindest eine Leiterbahn von einer elektrischen Isolierschicht abgedeckt ist. Zur Schaffung einer elektrischen Heizvorrichtung, die in verbesserter Weise ein Ausleiten von Wärme des PTC-Heizelementes an die Umgebung ermöglicht, wird mit der vorliegenden Erfindung vorgeschlagen, die Heizrippe durch einen Heizrippenrahmen auszubilden, der zumindest ein Fenster aufweist, in dem die Isolierlage freiliegt.

IPC 8 full level
F24H 1/00 (2006.01); **B60H 1/22** (2006.01); **F24H 1/12** (2006.01); **F24H 3/04** (2006.01); **F24H 9/18** (2006.01); **H05B 3/28** (2006.01); **H05B 3/48** (2006.01); **H05K 5/00** (2006.01)

CPC (source: CN EP US)
F24H 1/009 (2013.01 - EP US); **F24H 1/121** (2013.01 - EP US); **F24H 3/0458** (2013.01 - EP US); **F24H 9/1827** (2013.01 - EP US); **H05B 3/04** (2013.01 - EP US); **H05B 3/06** (2013.01 - EP US); **H05B 3/12** (2013.01 - CN); **H05B 3/18** (2013.01 - CN US); **H05B 3/50** (2013.01 - EP US); **F24H 3/0447** (2013.01 - EP US); **F24H 2250/04** (2013.01 - EP US); **H05B 2203/02** (2013.01 - EP US); **H05B 2203/023** (2013.01 - EP US)

Citation (applicant)
• EP 1921896 A1 20080514 - CATEM GMBH & CO KG [DE]
• EP 1768458 A1 20070328 - CATEM GMBH & CO KG [DE]

Citation (search report)
• [XYI] EP 1768459 A1 20070328 - CATEM GMBH & CO KG [DE]
• [YA] GB 2033709 A 19800521 - EICHENAUER F
• [A] DE 2948591 A1 19810611 - EICHENAUER FA FRITZ [DE]

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CN114126118A; DE102022206987A1; DE102017209990A1; US2018160480A1; US11035589B2; CN111901912A; DE102019202045B4; EP3820245A1; CN112788803A; US11395376B2; DE102020208643A1; EP4351273A1; DE102022125637A1

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