

Title (en)

HEATING DEVICE FOR HEATING WATER AND A METHOD FOR OPERATING SUCH A HEATING DEVICE

Title (de)

HEIZEINRICHTUNG ZUM ERHITZEN VON WASSER UND VERFAHREN ZUM BETRIEB EINER SOLCHEN HEIZEINRICHTUNG

Title (fr)

DISPOSITIF DE CHAUFFAGE D'EAU ET PROCEDE DE FONCTIONNEMENT D'UN TEL DISPOSITIF DE CHAUFFAGE

Publication

**EP 3145273 B1 20190807 (DE)**

Application

**EP 16188807 A 20160914**

Priority

- DE 102015218120 A 20150921
- DE 102015218121 A 20150921

Abstract (en)

[origin: US2017086257A1] A heating device for heating water has a carrier to which at least one heating element is applied, the heating element having one or more heating conductors which are connected one behind the other. The heating device has a flat dielectric layer which substantially covers the heating conductors or the heating element. An electrically conductive connection area is in each case provided on both sides of the dielectric layer with the same coverage. At least one of the connection areas is connected to a controller for evaluating a leakage current as current flows through the dielectric layer, and the heating element is connected to measuring means for monitoring a heating conductor current through the heating element. Both the leakage current and the heating conductor current are monitored over time and faults can be identified if there are conspicuous changes.

IPC 8 full level

**H05B 1/02** (2006.01); **F24H 1/50** (2006.01); **H05B 3/26** (2006.01)

CPC (source: CN EP US)

**A47L 15/4285** (2013.01 - CN); **F24H 1/0018** (2013.01 - EP US); **F24H 1/102** (2013.01 - EP US); **H05B 1/0244** (2013.01 - US); **H05B 1/0294** (2013.01 - EP US); **H05B 3/26** (2013.01 - EP US); **A47L 2401/30** (2013.01 - CN); **A47L 2501/06** (2013.01 - CN); **F24H 2250/04** (2013.01 - EP US); **H05B 2203/005** (2013.01 - EP US); **H05B 2203/013** (2013.01 - EP US); **H05B 2203/019** (2013.01 - EP US); **H05B 2203/02** (2013.01 - EP US); **H05B 2203/021** (2013.01 - US); **H05B 2203/03** (2013.01 - EP US); **H05B 2203/037** (2013.01 - EP US)

Cited by

EP3614797A1; EP3637948A1; CN109246866A; DE102018213869A1; DE102018213869B4; WO2021170232A1; WO2021170331A1; US11585574B2; US11044789B2; EP3930421A1; DE102020207784A1; DE102018217239B4; EP3901466A1; EP3637949B1

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**EP 3145273 A1 20170322**; **EP 3145273 B1 20190807**; CN 106993995 A 20170801; ES 2751548 T3 20200401; PL 3145273 T3 20200331; US 2017086257 A1 20170323

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