

Title (en)  
PTC HEATER FOR LIQUID HEATING

Title (de)  
PTC FLÜSSIGKEITSERHITZER

Title (fr)  
CHAUFFAGE PTC POUR CHAUFFAGE AU LIQUIDE

Publication  
**EP 3276281 B1 20200603 (EN)**

Application  
**EP 17158317 A 20170228**

Priority  
CN 201620804786 U 20160728

Abstract (en)  
[origin: EP3276281A1] A PTC (Positive Temperature Coefficient) heater for liquid heating may include: a heat conductor; a PTC heating assembly; and water pipe assembly. The heat conductor may have a first accommodating duct and a second accommodating duct. The PTC heating assembly at least partially is disposed in the first accommodating duct; moreover, the water pipe assembly at least partially is disposed in the second accommodating duct, with an outer surface of the water pipe assembly at least partially abutting against an inner surface of the second accommodating duct. The PTC liquid heating tube of the present disclosure can achieve a better corrosion resistance and greatly extend the service life of the PTC heater as well as prevent electric leakage accidents. Furthermore, the PTC heater of the present disclosure will have a simple structure and low costs for being convenient to assemble, especially in the replacement of the water pipes for maintaining the PTC heater in future.

IPC 8 full level  
**F24H 1/14** (2006.01); **E04H 4/12** (2006.01); **F24H 9/12** (2006.01); **F24H 9/18** (2006.01)

CPC (source: EP US)  
**E04H 4/129** (2013.01 - EP US); **F24H 1/142** (2013.01 - EP US); **F24H 9/139** (2022.01 - EP US); **F24H 9/1827** (2013.01 - EP US); **F24H 2250/04** (2013.01 - EP US)

Citation (examination)  
US 6330395 B1 20011211 - WU CHIA-HSIUNG [TW]

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 RS SE SI SK SM TR

DOCDB simple family (publication)  
**EP 3276281 A1 20180131**; **EP 3276281 B1 20200603**; CN 206037391 U 20170322; US 2018031272 A1 20180201

DOCDB simple family (application)  
**EP 17158317 A 20170228**; CN 201620804786 U 20160728; US 201715445470 A 20170228