

Title (en)
CERAMIC HEATER

Title (de)
KERAMIKERHITZER

Title (fr)
DISPOSITIF DE CHAUFFAGE EN CÉRAMIQUE

Publication
EP 3595406 A1 20200115 (EN)

Application
EP 19185691 A 20190711

Priority
JP 2018131949 A 20180712

Abstract (en)
[Objective] To assuredly ground a ceramic heater to the outside via a metal flange which is joined by an insulating material.[Means for Solution] A ceramic heater includes: a heater body that is made of ceramic, has a tubular shape, and extends in an axial direction; and a flange that is made of a metal, has an annular shape, and is fitted onto the heater body. A ground wire is connected to the flange. The flange has a recess-shaped portion which includes a side portion that has a cylindrical shape and extends in the axial direction, and a bottom portion that is continuous with the side portion and is curved so as to have a radius reduced in a radial direction. The recess-shaped portion is filled with an insulating material, and is joined to the heater body via the insulating material. The flange further has an extension portion that is continuous with the bottom portion, extends toward an end side in the axial direction, and is directly exposed to water.

IPC 8 full level
H05B 3/06 (2006.01); **H05B 3/48** (2006.01); **H05B 3/82** (2006.01)

CPC (source: CN EP)
H05B 3/06 (2013.01 - CN EP); **H05B 3/141** (2013.01 - CN); **H05B 3/16** (2013.01 - CN); **H05B 3/48** (2013.01 - EP); **H05B 3/82** (2013.01 - EP); **H05B 2203/003** (2013.01 - EP); **H05B 2203/009** (2013.01 - EP); **H05B 2203/021** (2013.01 - EP)

Citation (applicant)
JP 2017069083 A 20170406 - NGK SPARK PLUG CO

Citation (search report)
• [I] JP H1174063 A 19990316 - KYOCERA CORP
• [A] CN 108076542 A 20180525 - GUANGDONG SHUNDE GUANGSHENG APPLIANCES SHARES CO LTD
• [A] EP 3214896 A1 20170906 - NGK SPARK PLUG CO [JP]
• [A] EP 3282814 A1 20180214 - KYOCERA CORP [JP]

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

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3595406 A1 20200115; **EP 3595406 B1 20220406**; CN 110719653 A 20200121; CN 110719653 B 20220614; ES 2911664 T3 20220520; JP 2020009704 A 20200116; JP 6860277 B2 20210414

DOCDB simple family (application)
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