

Title (en)
BURNER DEVICE FOR A FUEL CELL SYSTEM

Title (de)
BRENNERVORRICHTUNG FÜR EIN BRENNSTOFFZELLENSYSTEM

Title (fr)
DISPOSITIF BRÛLEUR POUR UN SYSTÈME DE PILE À COMBUSTIBLE

Publication
EP 4251920 A1 20231004 (DE)

Application
EP 21816307 A 20211123

Priority
• AT 510192020 A 20201124
• AT 2021060442 W 20211123

Abstract (en)
[origin: WO2022109642A1] The invention relates to a burner device (10) for a fuel cell system (100), having a burner housing (20) with a burner inlet (22) for admitting a fuel/air mixture (BL) and a burner outlet (24) for discharging a burner exhaust gas/air mixture (BAL). The burner device additionally has a catalyst body (30) within the burner housing (20), comprising a catalyst cavity (32) into which the burner inlet (22) opens, wherein the catalyst body (30) is gas-permeable and has a catalyst surface (34) with an at least partly catalytic coating (36), and a bypass volume (40) is formed between the catalyst surface (34) and the burner housing (20), said bypass volume opening into the burner outlet (24). The catalyst body (30) additionally has a longitudinal axis (LA), and the catalyst surface (34) has a cross-sectional contour (QK) which deviates from a circular shape at least in some sections with respect to the longitudinal axis (LA).

IPC 8 full level
F23C 13/06 (2006.01); **F23C 99/00** (2006.01); **F23D 14/02** (2006.01); **H01M 8/04** (2016.01)

CPC (source: AT EP US)
F23C 13/06 (2013.01 - EP); **F23C 99/006** (2013.01 - EP); **F23D 14/02** (2013.01 - AT EP); **F23R 3/40** (2013.01 - US);
H01M 8/04022 (2013.01 - AT EP US); **H01M 8/04776** (2013.01 - US); **H01M 8/0662** (2013.01 - EP); **H01M 2008/1293** (2013.01 - AT);
Y02E 60/50 (2013.01 - EP)

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

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
WO 2022109642 A1 20220602; AT 524310 A4 20220515; AT 524310 B1 20220515; CN 116491003 A 20230725; EP 4251920 A1 20231004;
US 2024097155 A1 20240321

DOCDB simple family (application)
AT 2021060442 W 20211123; AT 510192020 A 20201124; CN 202180074567 A 20211123; EP 21816307 A 20211123;
US 202118038456 A 20211123