

Title (en)

FUEL CELL SYSTEM COMPRISING AT LEAST ONE FUEL CELL

Title (de)

BRENNSTOFFZELLENSYSTEM MIT WENIGSTENS EINER BRENNSTOFFZELLE

Title (fr)

SYSTÈME DE PILE À COMBUSTIBLE COMPRENANT AU MOINS UNE PILE A COMBUSTIBLE

Publication

EP 2399315 A1 20111228 (DE)

Application

EP 10702424 A 20100127

Priority

- EP 2010000469 W 20100127
- DE 102009009673 A 20090219

Abstract (en)

[origin: WO2010094388A1] A fuel cell system (1) comprises at least one fuel cell (2) that has a cathode region (3) and an anode region (4). The fuel cell system further comprises an exchanging device (12), through which an intake air stream flowing to the cathode region (3) and a used air stream discharged from the cathode region (3) flow. In said exchanging device (12), heat is transferred from the intake air stream to the used air stream, and steam is simultaneously transferred from the used air stream to the intake air stream. The fuel cell system also comprises a compressor (6) which can be driven at least in an assisting manner by a turbine (16). Said turbine (16) is disposed downstream of the exchanging device (12) and is penetrated by used air. Furthermore, a catalytic material, to which a fuel-containing gas can be fed, is disposed upstream of the turbine (16). According to the invention, the catalytic material (13) is integrated into the exchanging device (12) at the used air end, to which an exhaust gas from the anode region (4) can be fed.

IPC 8 full level

H01M 8/04089 (2016.01); **H01M 8/04111** (2016.01); **H01M 8/04119** (2016.01); **H01M 8/0662** (2016.01)

CPC (source: EP US)

H01M 8/04097 (2013.01 - EP US); **H01M 8/04111** (2013.01 - EP US); **H01M 8/04141** (2013.01 - EP US); **H01M 8/0662** (2013.01 - EP US); **Y02E 60/50** (2013.01 - EP)

Designated contracting state (EPC)

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 SE SI SK SM TR

DOCDB simple family (publication)

DE 102009009673 A1 20100826; CN 102318118 A 20120111; CN 102318118 B 20150121; EP 2399315 A1 20111228; JP 2012518257 A 20120809; JP 5439505 B2 20140312; US 2012040258 A1 20120216; WO 2010094388 A1 20100826

DOCDB simple family (application)

DE 102009009673 A 20090219; CN 201080008001 A 20100127; EP 10702424 A 20100127; EP 2010000469 W 20100127; JP 2011550443 A 20100127; US 201013202138 A 20100127