

Title (en)
FUEL-CELL SYSTEM WITH EXHAUST-AIR MASS FLOW DETERMINATION

Title (de)
BRENNSTOFFZELLENSYSTEM MIT ABLUFTMASSENSTROMERMITTLUNG

Title (fr)
SYSTÈME DE PILE À COMBUSTIBLE À DÉTERMINATION DE DÉBIT MASSIQUE D'AIR D'ÉVACUATION

Publication
EP 4256634 A1 20231011 (DE)

Application
EP 21823798 A 20211129

Priority
• DE 102020215093 A 20201201
• EP 2021083317 W 20211129

Abstract (en)
[origin: WO2022117490A1] A fuel-cell system has at least one fuel cell, an oxidant line, a compressor, an exhaust-air line, a turbine, which is arranged in the exhaust-air line and is coupled to the compressor, an anode-purging line, which is connected to the exhaust-air line and has an anode-purging valve, and a control unit. The fuel-cell system is characterized in that a temperature-detecting unit is arranged at a turbine input, or upstream of the turbine input, for detecting the temperature of exhaust air flowing into the turbine, in that a pressure-detecting unit is coupled at least to the turbine input or a component lying upstream and is designed to detect a pressure of the exhaust air flowing into the turbine, in that the control unit is designed to ascertain a momentary mass flow of the exhaust air from the measured temperature of the exhaust air, the pressure upstream of the turbine and a specified turbine characteristic map, and in that the control unit is designed to activate the compressor and/or the turbine so as to achieve a minimum mass flow of the exhaust air.

IPC 8 full level
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CPC (source: EP US)
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Citation (search report)
See references of WO 2022117490A1

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KH MA MD TN

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