

Title (en)

METHOD FOR DETECTING A HYDROGEN LEAK IN A FUEL CELL SYSTEM AND FUEL CELL SYSTEM FOR IMPLEMENTING SUCH A METHOD

Title (de)

VERFAHREN ZUR ERKENNUNG EINES WASSERSTOFFFLECKS IN EINEM BRENNSTOFFZELLENSYSTEM UND BRENNSTOFFZELLENSYSTEM ZUR DURCHFÜHRUNG EINES SOLCHEN VERFAHRENS

Title (fr)

MÉTHODE DE DÉTECTION DE FUITE D'HYDROGÈNE DANS UN SYSTÈME DE PILE À COMBUSTIBLE ET SYSTÈME DE PILE À COMBUSTIBLE POUR LA MISE EN OEUVRE D'UNE TELLE MÉTHODE

Publication

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Application

EP 22733400 A 20220610

Priority

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- EP 2022065911 W 20220610

Abstract (en)

[origin: WO2022258839A1] This method for detecting a hydrogen leak applies to a fuel cell system (10) comprising a fuel cell (12); a hydrogen supply system (30) comprising a reservoir (32) and the supply circuit (34) connecting the reservoir to the anode compartment (16) of the fuel cell and comprising an ejector (36) of venturi type; a recirculation circuit (60) for recirculating unconsumed hydrogen between the anode compartment of the fuel cell and the venturi-type ejector (36), the recirculation being sustained by the venturi-effect ejector. The method comprises steps involving calculating the total flow rate of hydrogen consumed; calculating the flowrate of hydrogen admitted to the injector; determining the leak rate as the difference between the flowrate of hydrogen admitted and the total flowrate of hydrogen consumed; and detecting a potential leak of hydrogen by comparing the leak rate against at least a threshold value, such that the method detects all of the hydrogen leaks that occur in the system downstream of the ejector.

IPC 8 full level

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