

Title (en)

PROCESS FOR INCREASING SHELF LIFE OF PEM FUEL CELL

Title (de)

VERFAHREN ZUR STEIGERUNG DER LEBENSDAUER EINER PEM-BRENNSTOFFZELLE

Title (fr)

PROCÉDÉ POUR AUGMENTER LA DURÉE DE VIE D'UNE PILE À COMBUSTIBLE À MEMBRANE ÉCHANGEUSE DE PROTONS

Publication

**EP 2805371 A1 20141126 (FR)**

Application

**EP 13700406 A 20130118**

Priority

- FR 1250555 A 20120119
- EP 2013050891 W 20130118

Abstract (en)

[origin: WO2013107841A1] The subject matter of the invention is a method for increasing the lifespan of a fuel cell having a proton exchange membrane comprising an electrochemical cell supplied with fuel with at least one catalytic electrode comprising carbon and one catalyst made from noble metal which can be platinum or palladium or ruthenium, and means for measuring the voltage of said cell characterised in that it comprises at least the following steps: - a first phase (Ph1) of supplying said cell with a first flow of fuel comprising hydrogen for a first period (T1) and resulting in the definition of a first slope (a) of the curve indicating the change in voltage of said cell as a function of time; - a second phase (Ph2) of supplying said cell with a second flow of fuel comprising hydrogen and a quantity of polluting species containing sulphur for a second period (T2), said second period and the quantity of polluting species being such that they result in the defining of a second slope (b) of the curve indicating the change in voltage of said cell as a function of time, the ratio of said second slope over said first slope (b/a) being strictly greater than a value of 1, said second phase generating the capture of said polluting species by said catalytic electrode; - a third phase (Ph3) for regenerating the catalytic electrode comprising the elimination of said polluting species.

IPC 8 full level

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Citation (search report)

See references of WO 2013107841A1

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