

Title (en)
ELECTROCHEMICAL FUEL CELL STACK

Title (de)
ELEKTROCHEMISCHER BRENNSTOFFZELLENSTAPEL MIT POLYMERELEKTROLYTEN

Title (fr)
EMPILEMENT DE PILES A COMBUSTIBLE ELECTROCHIMIQUES

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Application
EP 00983062 A 20001026

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• DE 19953404 A 19991106

Abstract (en)
[origin: WO0135476A1] The invention relates to an electrochemical fuel cell stack, comprising at least one membrane-electrode unit consisting of an anode, a cathode and an electrolyte membrane arranged therebetween, at least one gas distribution structure on the anode side with an anode gas entry zone, an anode gas exit zone, in addition to channels for guiding the anode gas from the anode gas entry zone to the anode gas exit zone, said anode gas containing hydrogen, at least one gas distribution structure on the cathode side with a cathode gas entry zone, a cathode gas exit zone, in addition to channels for guiding the cathode gas from the cathode gas entry zone to the cathode gas exit zone, said cathode gas containing oxygen and water vapour, a coolant distribution structure with a coolant entry zone, a coolant exit zone, in addition to channels for guiding the coolant from the coolant entry zone to the coolant exit zone. According to the invention, the coolant entry zone and the cathode gas exit zone overlap at least partially, in such a way that the water vapour can condense out of the cathode waste gas in this overlap zone.
[origin: WO0135476A1] The invention relates to an electrochemical fuel cell stack, comprising - at least one membrane-electrode unit consisting of an anode, a cathode and an electrolyte membrane arranged therebetween, - at least one gas distribution structure on the anode side with an anode gas entry zone, an anode gas exit zone, in addition to channels for guiding the anode gas from the anode gas entry zone to the anode gas exit zone, said anode gas containing hydrogen, - at least one gas distribution structure on the cathode side with a cathode gas entry zone, a cathode gas exit zone, in addition to channels for guiding the cathode gas from the cathode gas entry zone to the cathode gas exit zone, said cathode gas containing oxygen and water vapour, - a coolant distribution structure with a coolant entry zone, a coolant exit zone, in addition to channels for guiding the coolant from the coolant entry zone to the coolant exit zone. According to the invention, the coolant entry zone and the cathode gas exit zone overlap at least partially, in such a way that the water vapour can condense out of the cathode waste gas in this overlap zone.

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