

Title (en)

ELECTROCHEMICAL GENERATOR ON BASE OF HYDROGEN-AIR OR OXYGEN FUEL CELLS

Title (de)

ELEKTROCHEMISCHER GENERATOR AUF DER BASIS VON WASSERSTOFF-LUFT- ODER SAUERSTOFF-BRENNSTOFFZELLEN

Title (fr)

GENERATEUR ELECTROCHIMIQUE SUR LA BASE DE PILES A COMBUSTIBLE HYDROGENE/AIR OU HYDROGENE/OXYGENE

Publication

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Application

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Priority

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Abstract (en)

[origin: WO2006041328A1] The invention relates to the field of electrochemical generators (ECG) on the base of fuel cells (FC) with an alkaline electrolyte and may be used in the production of the aforesaid generators. In accordance with the invention an ECG on the base of hydrogen-air (oxygen) fuel cells comprises a stack of fuel cells, systems for supplying and blowing hydrogen and air (oxygen), an electrolyte circulation loop with a pump, a heat exchanger, a heater and electrolyte tank with temperature and electrolyte level sensors, wherein the electrolyte tank, pump, heater, level and temperature sensors are made in the form of a single aggregate, which is placed under the stack of fuel cells. The electrolyte circulation loop may further comprise a mechanical filter disposed in the electrolyte tank. The heater may be made in the form of a catalytic burner and/or electrical heater. The electrolyte tank may be made with the bottom inclined to the center and may comprise a cylindrical vessel in the center with level sensors, wherein the vessel is in electrolyte communication with the electrolyte of the electrolyte tank and is insulated in respect to the gaseous medium from the gaseous medium of the electrolyte tank. The pipelines for the discharge of air (oxygen) from the stack of fuel cells may be connected to the gaseous medium of the electrolyte tank, and the pipelines for the discharge of hydrogen from the stack of fuel cells may be connected to the gaseous medium of the cylindrical vessel. The volume of the electrolyte tank is greater than the volume of the electrolyte in the electrolyte loop of the electrochemical generator.

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