

Title (en)
ELECTROLYSIS CELL COMPRISING SULFUR DIOXIDE-DEPOLARIZED ANODE AND METHOD OF USING THE SAME IN HYDROGEN GENERATION

Title (de)
ELEKTROLYSEZELLE MIT EINER SCHWEFELDIOXID-DEPOLARISIERTEN ANODE UND VERFAHREN ZU IHRER VERWENDUNG BEI DER WASSERSTOFFERZEUGUNG

Title (fr)
CELLULE D'ÉLECTROLYSE RENFERMANT UNE ANODE DÉPOLARISÉE AU DIOXYDE DE SOUFRE ET PROCÉDÉ D'UTILISATION DE CELLE-CI DANS LA GÉNÉRATION D'HYDROGÈNE

Publication
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Application
EP 08844637 A 20080801

Priority
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• US 96347807 P 20070803

Abstract (en)
[origin: US2009045073A1] Electrolysis cell and method of using the same in hydrogen generation. According to one embodiment, the electrolysis cell includes a frame having an interior. A proton exchange membrane (PEM) is disposed within the frame to divide the interior into two chambers. An anode in the form of a gas diffusion electrode is disposed within the interior of the frame and is spaced apart from the PEM, the space between the anode and the PEM being filled with an aqueous sulfuric acid. A cathode is disposed within the interior of the frame and is ionically coupled to the PEM. In use, gaseous sulfur dioxide is delivered to the side of the anode facing away from the sulfuric acid solution, and a current is supplied to the electrolysis cell. Consequently, sulfur dioxide is oxidized at the anode, and molecular hydrogen is generated at the cathode.

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CPC (source: EP US)
C25B 1/02 (2013.01 - EP US); **C25B 1/22** (2013.01 - EP US); **Y02E 60/36** (2013.01 - US)

Citation (search report)
• [X] US 4330378 A 19820518 - BOLTERSDORF DAGMAR, et al
• [X] B.D. STRUCK: "a three-compartment electrolytic cell for anodic oxidation of sulfur dioxide and cathodic production of hydrogen", INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol. 7, no. 1, 1982, pages 43 - 49, XP002588304
• See references of WO 2009058170A1

Designated contracting state (EPC)
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DOCDB simple family (application)
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