

Title (en)

HIGH TEMPERATURE ELECTROLYZER (HTE) INCLUDING A PLURALITY OF CELLS, HAVING IMPROVED OPERATION IN THE EVENT OF BREAKAGE OF AT LEAST ONE CELL AND DURING AGING

Title (de)

HOCHTEMPERATURELEKTROLYSATOR (HTE) MIT MEHREREN ZELLEN MIT VERBESSERTEM BETRIEB IM FALLE EINES BRUCHS VON MINDESTENS EINER ZELLE UND WAHREND DER ALTERUNG

Title (fr)

ELECTROLYSEUR A HAUTE TEMPERATURE (EHT) COMPRENANT UNE PLURALITE DE CELLULES, A FONCTIONNEMENT AMELIORE EN CAS DE CASSE D'AU MOINS UNE CELLULE ET EN VIEILLISSEMENT

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Application

EP 11707682 A 20110311

Priority

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- EP 2011053725 W 20110311

Abstract (en)

[origin: WO2011110676A1] The invention relates to an improvement in the process of electrolyzing water at high temperatures implemented by a cell stack reactor. According to the invention, the following steps are carried out: a/ simultaneously circulating the water vapor (12, 13) to each cathode and to each anode as a leaching gas, the temperatures of the water vapor at the inlet of each anode and each cathode being lower than the high temperatures at which the electrolysis is carried out and the water vapor circulating at the anode being at an overpressure with respect to the cathode, b/ upon starting the electrolysis, supplying electrical power having a substantially constant electrical voltage U0 across the terminals of the stack and maintaining same. Thus, in the event of breakage of one or more cells, the complete destruction of the stack is avoided and high production efficiency is maintained. In addition, the invention provides for maintaining efficiency during aging.

IPC 8 full level

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Citation (search report)

See references of WO 2011110676A1

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