

Title (en)

HIGH-POROSITY HEAT-COMPACTED NICKEL POWDER ELECTRODE FOR ALKALINE WATER ELECTROLYSERS

Publication

EP 0059902 B1 19850717 (DE)

Application

EP 82101509 A 19820227

Priority

DE 3109183 A 19810311

Abstract (en)

[origin: ES8303547A1] The invention concerns a highly porous electrode of special construction and hot-pressed or sintered from nickel powder with the addition of a catalyst and a method for its manufacture. The electrode is characterized by catalytic promotion and long term stabilization by means of an addition of Ti and/or the formation of a surface layer of a stable mixed Ni-Ti oxide so that, when it is used for the electrolysis of water in alkaline electrolytes, the production of the gases of electrolysis takes place with the lowest possible polarization even at high current densities and that it retains its catalytic properties even at high temperatures of the electrolyte or during long times of operation. Because of its favorable properties, the use of the electrode is not limited to water electrolysis technology but is also possible in other technical fields of application such as, for example, the electrolysis of alkali chlorides or the hardening of fats. The electrode can be used both as an anode and a cathode.

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C25B 11/06

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