Title (en)

THREE-CHAMBER ELECTROLYSIS CELL FOR THE PRODUCTION OF ALKALI METAL ALCOHOLATE

Title (de)

DREIKAMMERELEKTROLYSEZELLE ZUR HERSTELLUNG VON ALKALIMETALLALKOHOLATEN

Title (fr)

CELLULE D'ÉLECTROLYSE À TROIS CHAMBRE DESTINÉE À LA PRODUCTION D'ALCOOLATES ALCALIMÉTAUX

Publication

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Application

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Priority

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Abstract (en)

[origin: WO2023274794A1] In a first aspect, the invention relates to an electrolytic cell that has three chambers, the central chamber being separated from the cathode chamber by a cation-permeable solid electrolyte, e.g. NaSICON, and being separated from the anode chamber by a diffusion barrier, e.g. a cation- or anion-selective membrane. The invention is characterized in that the central chamber comprises a mechanical stirring device. The electrolytic cell of the invention solves the problem consisting in the formation of a concentration gradient in the central chamber of the electrolytic cell during the electrolysis process, resulting in locally reduced pH values and thus the solid electrolyte getting damaged. The mechanical stirring device allows the electrolyte solution in the central chamber to be stirred during the electrolysis process, resulting in the electrolyte solution in the central chamber being mixed, thus preventing the formation of a pH gradient. In a second aspect, the invention relates to a method for producing an alkali metal alkoxy solution in the electrolytic cell of the invention.

IPC 8 full level

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