Title (en)

BIPOLAR MULTI-PURPOSE ELECTROLYTIC CELL FOR HIGH CURRENT LOADS

Title (de)

BIPOLARE MEHRZWECKELEKTROLYSEZELLE FÜR HOHE STROMBELASTUNGEN

Title (fr)

CELLULE ELECTROLYTIQUE POLYVALENTE BIPOLAIRE DESTINEE A DES CHARGES ELECTRIQUES ELEVEES

Publication

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Application

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Priority

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Abstract (en)

[origin: WO0186026A1] The invention relates to a bipolar multi-purpose electrolytic cell for high current loads comprised of a tenter frame, two electrode edge plates with metal electrode sheets and power supply and of bipolar electrode plates, which are each comprised of a plastic electrode base body with electrode rear spaces and/or with cooling spaces that are incorporated on one or both sides, incorporated supply and discharge lines for the electrolyte solutions and the cooling medium, metal electrode sheets, which are applied to both sides of the base body and are solid and/or perforated in the electrochemically active area, electrolyte sealing frames, which rest on the solid metal electrode sheets, which are made of flexible plastic, and ion exchanger membranes, which rest on the perforated metal electrode sheets and/or on the electrolyte sealing frames and which are provided for separating the electrode spaces. The invention is characterized in that the electrode plates have a height to width ratio ranging from 30: 1 to 1.5: 1, the metal electrode sheets and the electrolyte sealing frames laterally project beyond the electrode base bodies and mechanically stabilize both vertical contact rails arranged on both sides of the electrode base bodies at a distance ranging from 1 to 50 mm therefrom as well as in the vicinity of the electrolyte sealing frames with the electrode base bodies. The electrode plates are joined as autonomous units of mountable bipolar electrode plates, whereby the electric insulation of two adjacent bipolar units from one another is effected by the electrolyte sealing frames during simultaneously sealing of the electrolyte spaces when tensioning the electrode plates using the tenter frame by means of application force.

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C25B 9/00; C25B 9/04

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