

Title (en)
BIPOLAR PLATE FOR CHEMICAL DELIMITATION AND ELECTRICAL SERIES CONNECTION OF STACKED PEM FUEL CELLS OR PEM ELECTROLYZERS

Title (de)
BIPOLARPLATTE ZUR CHEMISCHEN ABGRENZUNG UND ELEKTRISCHEN REIHENSCHALTUNG AUFEINANDER GESTAPELTER PEM-BRENNSTOFFZELLEN ODER PEM-ELEKTROLYSEURE

Title (fr)
PLAQUE BIPOLAIRE POUR LA DÉLIMITATION CHIMIQUE ET LE MONTAGE EN SÉRIE ÉLECTRIQUE DE PILES À COMBUSTIBLE PEM OU D'ÉLECTROLYSEURS PEM EMPILÉ(E)S

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Abstract (en)
[origin: WO2023274912A1] A bipolar plate (1) for chemical delimitation and electrical series connection of stacked PEM fuel cells or PEM electrolyzers comprises a gas-impermeable barrier layer (2), a first surface electrode (6) in a central region (5) on a first side (3) of the barrier layer (2), and an electrical connection between the first surface electrode (6) on the first side (3) and an opposite second side (4) of the barrier layer (2). The barrier layer (2) comprises a plastics matrix (9). The first surface electrode (6) is openly porous and surrounded by a sealing edge (8) of the bipolar plate (1). The electrical connection comprises electrically conductive particles (10) embedded in the plastics matrix (9) of the barrier layer (2). The first surface electrode (6) comprises a first electrode matrix composed of plastics material, an electrical conductivity of the first surface electrode (6) being based on metal particles (13) embedded in the first electrode matrix (11).

IPC 8 full level
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