

Title (en)
METHOD FOR OPERATING A HYBRID RECTIFIER, HYBRID RECTIFIER, AND ELECTROLYTIC SYSTEM HAVING SUCH A HYBRID RECTIFIER

Title (de)
VERFAHREN ZUM BETRIEB EINES HYBRID-GLEICHRICHTERS, HYBRID-GLEICHRICHTER UND ELEKTROLYSEANLAGE MIT EINEM DERARTIGEN HYBRID-GLEICHRICHTER

Title (fr)
PROCÉDÉ DE FONCTIONNEMENT D'UN REDRESSEUR HYBRIDE, REDRESSEUR HYBRIDE ET SYSTÈME ÉLECTROLYTIQUE ÉQUIPÉ D'UN TEL REDRESSEUR HYBRIDE

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Application
EP 21770221 A 20210902

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Abstract (en)
[origin: WO2022063543A1] The application describes a method for operating a hybrid rectifier (1) for supplying a DC load (30) with a DC voltage (UDC) rectified from an AC system (20) and variable in voltage value, the hybrid rectifier (1) comprising an AC input (11), a DC output (12), and a thyristor rectifier (2) arranged in a first path (15) between the AC input (11) and the DC output (12), the hybrid rectifier (1) also comprising a transistor rectifier (3), which is arranged in a second path (16) connected parallel to the first path (15). The method has the following steps: if a DC voltage (UDC) at the DC output (12) of the hybrid rectifier (1) is below a voltage threshold value (UTH): operating the hybrid rectifier (1) in a first operating state in which the transistor rectifier (3) is disconnected from the DC output (12) and connected to the AC input (11) and in which the thyristor rectifier (2) is connected to both the AC input (11) and the DC output (12) so that a total active power (P) is transported from the AC input (11) to the DC output (12) via the thyristor rectifier (2) and not via the transistor rectifier (3); and if the DC voltage (UDC) at the DC output (12) of the hybrid rectifier (1) reaches or exceeds the voltage threshold value (UTH): operating the hybrid rectifier (1) in a second operating state in which the thyristor rectifier (2) and the transistor rectifier (3) are each connected to the AC input (11) on one side and to the DC output (12) on the other side, and wherein the total active power (P) is transported from the AC input (11) to the DC output (12) of the hybrid rectifier (1) both via the thyristor rectifier (2) and via the transistor rectifier (3). The application also describes a hybrid rectifier (1) and an electrolytic system (40) having a hybrid rectifier (1) and an electrolyser (31) as the DC load (30).

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See references of WO 2022063543A1

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