

Title (en)

Device and method for electric power generation

Title (de)

Vorrichtung und Verfahren zur elektrischen Stromerzeugung

Title (fr)

Dispositif et procédé de production d'énergie électrique

Publication

EP 2660433 A1 20131106 (EN)

Application

EP 13166091 A 20130430

Priority

IT AN20120049 A 20120502

Abstract (en)

An electric power generation device comprising at least a first tank (2) and a second tank (3) for an operating fluid, provided respectively with a first connection means (7) having a respective opening and closing valve and a second connecting means (17) connecting the first (2) and second (3) tanks respectively to an input and an output of a motor means (5) operable by the operating fluid of the device (1); said first tank (2) is associated with a first heat exchanger means (8) powered by a respective circuit (8a, 8b) supplied on command from a first thermal fluid heated by a first heat source and is assigned to heat through the first heat exchanger means (8) the operating fluid contained in the first tank (2) yielding to it the heat taken from said first source. Said device (1) comprise at least a first opening and closing means (4) equipped with a respective opening and closing valve and connected to the first (2) and second (3) tanks to connect and separate the inner volumes where, starting from an initial equilibrium condition of the operating fluid of the two tanks (2, 3), the valves of the at least a first opening and closing means (4) and the first connecting means (7) are in the closed condition separating the operating fluid of the tanks and is controlled the flow of the first thermal fluid, heated to a temperature higher than the equilibrium one of the operating fluid, in the first heat exchanger means (8) raising the temperature of the operating fluid in the first tank and thereby raising the pressure to values higher than the equilibrium pressure and higher than the pressure of the operating fluid of the second tank (3) until reaching a predetermined temperature or pressure value at the achievement of which it is controlled the valve opening of the first connecting means (7) allowing the operating fluid of the first tank (2) to flow in the second tank (3) through the first (7) and second (17) connecting means and through the motor means (5) actuating it for the operation of a connected electric generator (6) or other users until the pressure difference between the two tanks reaches or falls below a predetermined value at which it is stopped the first fluid flow in the first heat exchanger means (8) and controlled the opening of the first opening and closing means (4) valve until reaching the equilibrium condition of the operating fluid of the two tanks (2, 3).

IPC 8 full level

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CPC (source: EP)

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Citation (applicant)

- EP 1801364 A1 20070627 - DOSHISHA [JP], et al
- DE 10126403 A1 20011206 - HOLDER KARL LUDWIG [DE]
- DE 102009057179 A1 20110609 - WERBA HANS [DE]
- DE 3624357 A1 19880128 - STANGER HARALD [DE]
- DE 102005049215 A1 20070419 - GUNDERMANN ALF [DE], et al

Citation (search report)

- [X] EP 1801364 A1 20070627 - DOSHISHA [JP], et al
- [X] DE 10126403 A1 20011206 - HOLDER KARL LUDWIG [DE]
- [X] DE 102009057179 A1 20110609 - WERBA HANS [DE]
- [A] DE 3624357 A1 19880128 - STANGER HARALD [DE]
- [I] DE 102005049215 A1 20070419 - GUNDERMANN ALF [DE], et al

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