Title (en)

METHOD AND APPARATUS FOR USE OF LOW-TEMPERATURE HEAT FOR ELECTRICITY GENERATION

Title (de)

VERFAHREN UND VORRICHTUNG ZUR NUTZUNG VON NIEDERTEMPERATURWÄRME ZUR STROMERZEUGUNG

Title (fr)

PROCÉDÉ ET DISPOSITIF D'UTILISATION DE CHALEUR À BASSE TEMPÉRATURE POUR LA PRODUCTION DE COURANT

Publication

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Application

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Priority

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Abstract (en)

[origin: CA2662463A1] The invention relates to the additional use of low-temperature heat for electricity generation using supercritical carbon dioxide as the working medium. The invention includes a method and an installation for use of the method, by means of which higher efficiency is achieved than with known methods and whose operating range covers a broader temperature band and thus a control range which makes it possible to ensure optimum driving during summer and winter without any design changes, with a simple physical design at the same time and without additional environmental hazards, with comparatively little hardwave complexity. At the same time, a reduction in the carbon dioxide emission is achieved. In order to implement the method, low-temperature heat is received from an existing heat source (1) by means of carbon dioxide, which is at a high supercritical pressure, as the heat carrier, and is then expanded, carrying out work, via an expansion machine (2) which is coupled to a generator (3) with the heat carrier being cooled down, then being liquefied using a refrigeration source (4) and being compressed again to the working pressure, in liquid form.

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