

Title (en)

METHOD AND APPARATUS FOR TRANSFORMING THERMAL ENERGY INTO MECHANICAL ENERGY WITH A HIGH DEGREE OF EFFICIENCY

Title (de)

VERFAHREN UND VORRICHTUNG ZUR UMWANDLUNG VON WÄRMEENERGIE IN MECHANISCHE ENERGIE MIT HOHEM WIRKUNGSGRAD

Title (fr)

PROCEDE ET APPAREIL DE TRANSFORMATION D'ENERGIE CALORIFIQUE EN ENERGIE MECANIQUE AVEC UN RENDEMENT ELEVE

Publication

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Application

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Abstract (en)

[origin: WO2006105815A1] The invention relates to a method and to a system for converting thermal energy into mechanical, electric and/or thermal energy with a high degree of efficiency by means of relieving a gaseous mixture in an expansion device (13) which is connected to an evaporator (3). The method consists of expulsing at least one first component of a mixture, which comprises at least one first component and at least one expulsion agent, in a separation device (2) by supplying thermal energy from an energy source (1), and transferring said first component to an evaporator (3). The expulsion agent is introduced in a separate manner into an expulsion washer (6), at least one second component is added to the expelled first component(s) in the evaporator (3) by forming a mixture, the mixture which is formed from the expelled first component(s) and the second component(s), which is a vapour in the form of a compressed gas and which is guided to at least one low pressure expansion device (4), is introduced and relieved, the relieved, released energy is partially transformed into mechanical, electric and/or thermal energy, the relieved mixture is introduced into at least one expulsion washer (6), wherein the expulsion agent is introduced into the mixture, the first component and the expulsion agent form a mixture by releasing thermal energy, which extracts the energy from at least one first component of the mixture, and the second component(s) is/are increased and is/are separated from the mixture, and the mixture is returned from the expulsion washer (6) into the separating device (2), and the second component(s) are returned from the expulsion washer (6) into the evaporator (3).

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