

Title (en)
PROGRESSIVE THERMODYNAMIC SYSTEM

Title (de)
PROGRESSIVES THERMODYNAMISCHES SYSTEM

Title (fr)
SYSTÈME THERMODYNAMIQUE PROGRESSIF

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Abstract (en)
[origin: WO2008094058A2] The invention refers to a thermo dynamic system able to capture heat from the surrounding environment and transform it in mechanical energy which is to be used partially for self functioning while the rest is saved for a consumer. The system can work with any heat source, but is also designed for very small temperature differences between the warm and the cold source, which makes it fit for working with non-conventional energy, especially solar energy. The system can be used to provide heat, mechanical energy or electrical energy to both small and large consumers. The system progressively increases this pressure using compressors with liquid, with refrigerant, isochoric- isobar compressors, compressors with atomizer, with constant volume, etc absorbing the heat from the environment it is placed in using receivers, bellow receivers, magnetized piston receivers, inline engine receivers, etc, and later transforming it in mechanical energy or even directly into electrical energy, through a pneumatic engine, a double gamma Stirling engine or through a special type of caged turbine capable of working with small enthalpy falls due to the large surface of the pallets. The pressure increase in the system can be also used to power a reversed cycle thermodynamic system, giving the possibility to obtain lower temperatures than the cold source's temperature or higher than the warm source's temperature. The pressure increase in the system's compressor is mainly obtained also through a thermal transfer in a compressor with constant volume. Figure 20 presents a system to be setup on sea surface: the whole installation is setup on some support pillars 20h, using supports 20i which are sliding with the tides transforming this energy in the rotation of an electrical generator. Series of horizontal receivers are setup on this supports: warm receivers 20j or cold receivers 20k that can be also used as a platform for technical interventions, for focusing mirrors, for caged turbines, for pressurized refrigerant tanks and other equipments. Using mobile arms 20m on the water level cold receivers are placed 20k, with the horizontal axis tangent to a circle circumference having the center in the axis of the support pillar, while the hot receivers 20j can move around a vertical axis for orientation: one side perpendicular on the wind direction and the other sides parallel to it. This way a wind turbine is achieved. On top, due to the wave movement the vertical receivers have an oscillating movement that is transformed into energy using some pistons 20e actuated by the mobile arm. At their turn, the cold and warm receivers are elements of double-gamma Stirling engines, Stirling compressors, compressors with refrigerant, compressors with constant volume, counter flow sequential heat exchangers. All of them leading to increased enthalpy of the working agent and to its transformation into electrical energy in a caged turbine.

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