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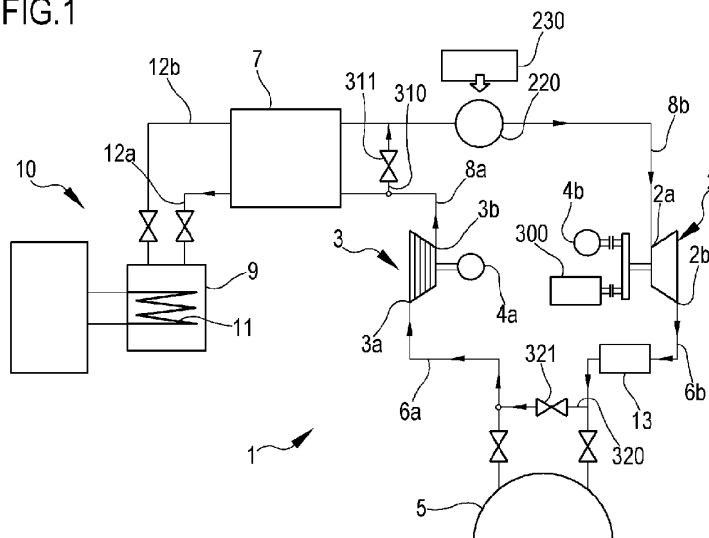
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(54) Title: PLANT AND PROCESS FOR ENERGY GENERATION AND STORAGE

FIG. 1



(57) Abstract: A plant (1) for storing energy comprises a casing (5) for the storage of a working fluid other than atmospheric air, in gaseous phase and in equilibrium of pressure with the atmosphere; a tank (9) for the storage of said working fluid in liquid or supercritical phase with a temperature close to the critical temperature; wherein said critical temperature is close to the ambient temperature. The plant (1) is configured to perform a closed cyclic thermodynamic transformation (CTT), first in one direction in a charge configuration and then in an opposite direction in a discharge configuration, between said casing (5) and said tank (9); wherein in the charge configuration the plant (1) stores heat and pressure and in the discharge configuration the plant generates energy. The plant (1) is also configured to define a closed circuit and to perform a closed thermodynamic cycle (TC) in the closed circuit with at least a part of the working fluid, optionally while the plant (1) is in the charge configuration or in the discharge configuration.

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