Low-temperature working fluid energy storage power generation

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This paper discusses low-temperature energy-saving technologies in heat and power supply systems. A technical and economic assessment of these areas is given. The results of using low-boiling liquids ...

Study results showed that there is a rapid development in heating, cooling and power generation technologies those use water/air as working fluid. These technologies demonstrate a ...

By decoupling heating and cooling demands from electricity consumption, thermal storage systems allow the integration of greater shares of variable renewable generation, such as solar and wind power.

Among many well-proven technologies, the ORC is one of the most favorable and promising ways for low-temperature applications. In comparison to water, organic fluids are advantageous when the ...

In this study, the theoretical models of two Carnot Battery systems with four different working fluid pairs were established, analyzed and compared. Genetic algorithm was introduced in ...

The main focus of this paper is low temperature reservoir (LTR), one of the critical component in PTES systems, as its performance effects the low pressure of the system there-by pressure ratio across ...

A two-zone water storage tank with a storage temperature of 115°C is used as thermal energy storage. For discharge, an Organic Rankine Cycle ...

By optimising heat recovery from low tem-perature sources, including combined heat-power (CHP) and thermal solar energy, they help to reduce dependence on fossil fuels. Nevertheless this benefit ...

Compared with the prior technology, the present invention has reliable performance, and is operated by heating and evaporating of the working fluid in a closed space to achieve increased...

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