

Heat pumps capture the heat from a cold source (mine water in this case) and transfer it to a hot source (e.g. water of the heating circuit, by means of a heat exchanger). ...

Experimental performance of a novel scraped surface heat exchanger for latent energy storage for domestic hot water generation. Author links open overlay panel A. Egea, A. ...

Heat transfer fluid is usually water mixed with ethylene glycol or propylene glycol. ... Four parameters, including injected heat, energy density, storage efficiency, and heat loss ...

Since thermal storage and heat exchanger (TSHE) technology plays an important role in advanced compressed air energy storage (CAES) systems, this chapter will introduce ...

contact heat transfer with the PCM eliminates the heat transfer resistance associated with tube walls that typically separate the PCM from the heat transfer fluid. A direct- contact heat ...

Thermal energy storage (TES) units are mainly used for storing cold or heat that is need to be utilized later at different temperatures, power, place, etc. [31], [32] pared ...

The new heat storage vessel is a plate-type heat exchanger unit with water as the working fluid and a phase change material (PCM) as the. ... Table 3 Specifications of the energy storage heat exchanger. Net thermal capacity ...

The efficiency and functioning of latent heat thermal energy storage units are significantly impacted by the efficient heat transfer between the heat exchanger tube and the ...

Parametric study of a scraped surface heat exchanger for latent energy storage for domestic hot water generation. Author links open overlay panel A. Egea, A. Garc&#237;a, J. ...

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The heat exchange capacity rate to the hot water store during charge of the hot water store must be so high that the efficiency of the energy system heating the heat store is ...

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