

Kongres Container

Working principle of solar temperature controlled circulation energy storage cabinet



Overview

Do cooling and heating conditions affect energy storage temperature control systems?

An energy storage temperature control system is proposed. The effect of different cooling and heating conditions on the proposed system was investigated. An experimental rig was constructed and the results were compared to a conventional temperature control system.

How much energy does a container storage temperature control system use?

The average daily energy consumption of the conventional air conditioning is 20.8 % in battery charging and discharging mode and 58.4 % in standby mode. The proposed container energy storage temperature control system has an average daily energy consumption of 30.1 % in battery charging and discharging mode and 39.8 % in standby mode. Fig. 10.

What is the COP of a container energy storage temperature control system?

It is found that the COP of the proposed temperature control system reaches 3.3. With the decrease of outdoor temperature, the COP of the proposed container energy storage temperature control system gradually increases, and the COP difference with conventional air conditioning gradually increases.

How much energy does a temperature control system use?

The average energy consumption of the proposed temperature control system accounts for about 3.5 % of the energy storage, in which the average energy consumption of charging mode and discharge mode accounts for 1.06 %, and the energy consumption of standby mode accounts for 1.41 %. Fig. 7.

Do temperature control systems save energy?

The energy consumption of the two temperature control system prototypes under the mode of twice charging and twice discharging per day and the analysis of the energy saving potential in typical cities applications are

investigated. The main conclusions of this study are as follows:.

What is the energy saving rate of composite temperature control system?

In Hohhot, the ACCOP of conventional air-cooled air conditioning is 4.1, while the proposed composite temperature control system reaches 5.1, and the energy saving rate is close to 25 %. Even if the proposed composite temperature control system is adopted in Guangzhou, the energy saving rate is still more than 5 %. Fig. 5.

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