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Patent Search

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Abstract:

The present invention relates to energy storage and cooking system. The object is to provide a system to store the energy and retrieve it whenever needed for cooking application. The proposed system is a latent heat storage system for solar cooking. Herein paraffin wax is used as PCM. An oil (HTF) used is Therminol 66. This system store energy up to the temperature of 200° C for more than 12 hours without retrieving any energy from it. Insulation is provided to whole system i.e. to storing tank also hence minimized the heat loss. Then this energy (heat) can be retrieved and can be supplied to the cooking vessel whenever cooking needs to be done. Followin described in detail with the help of Figure 1 of sheet 1 showing the proposed system and Figure 2 of sheet 1 showing exploded view of system.

Complete Specification

Claims: We claim:

1. An energy storage and cooking system which enables storage of solar energy which is received with the help of solar collector and supply to the cooking vessel whenever cooking needs to be done, characterized in that; said system comprises of,
 - a heat energy transferring pipe (6) provided to increase pressure having coil (7) to circulate the oil,
 - a heat storage tank (2) connected with said pipe (6) made up of shell and tubes in which a paraffin wax is used as phase change material (PCM) to store the heat an (Heat Transfer Fluid),
 - and a pump (3) is provided to return the oil to solar collector (5) for its heating (receiving heat) at the time of sun shine hours and to accelerate the cooking rate.
 wherein oil heated upto 200°C and circulated which gives heat to PCM and PCM temperature starts increasing upto the phase change temperature and this circulat continues till equilibrium.

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