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(71)Name of Applicant :
1)PANDIT DEENDAYAL ENERGY UNIVERSITY
 Address of Applicant :PANDIT DEENDAYAL ENERGY UNIVERSITY KNOWLEDGE CORRIDOR, RAISAN VILLAGE, GANDHINAGAR-382 007, GUJARAT, INDIA. -----

Name of Applicant : NA
 Address of Applicant : NA

(72)Name of Inventor :
1)DR.NAMRATA BIST
 Address of Applicant :PANDIT DEENDAYAL ENERGY UNIVERSITY KNOWLEDGE CORRIDOR, RAISAN VILLAGE, GANDHINAGAR-382 007, GUJARAT, INDIA. -----

2)DR.ANIRBID SIRCAR
 Address of Applicant :PANDIT DEENDAYAL ENERGY UNIVERSITY KNOWLEDGE CORRIDOR, RAISAN VILLAGE, GANDHINAGAR-382 007, GUJARAT, INDIA. -----

3)DR.KRITI YADAV
 Address of Applicant :PANDIT DEENDAYAL ENERGY UNIVERSITY KNOWLEDGE CORRIDOR, RAISAN VILLAGE, GANDHINAGAR-382 007, GUJARAT, INDIA. -----

(57) Abstract :

The present invention showcases the desalination of geothermal water by hybridizing solar thermal and pervaporation systems. The system comprises a sand filter to separate unwanted particles, where tank1 and tank2 are utilized for storing geothermal fluid for the remaining application process. Heat Exchangers (HEX 1 and HEX 2) are used to exchange heat between thermic fluid and geofluid. Temperature sensors display input and output temperature of the solar collector, pervaporation desalination system, condenser, and tank 3. Solar thermal collectors such as parabolic trough and evacuated tube collectors are determined for temperature elevation, and the pervaporation process is carried out in desalinating geofluid. Lastly, the desalinated water is condensed and transferred to tank 3 for drinking purposes.

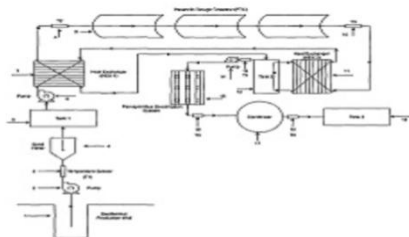


Figure 1. Illustrates the detailed embodiment of solar parabolic trough collector assisted with geothermal fluid for pervaporation desalination system

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