

(54) Title of the invention : SOLAR GEO THERMAL HYBRID DESALINATION SYSTEM

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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 - 382007, GUJARAT, INDIA. -----

Name of Applicant : NA
 Address of Applicant : NA

(72)Name of Inventor :
1)TARUN SHAH
 Address of Applicant :PANDIT DEENDAYAL ENERGY UNIVERSITY KNOWLEDGE CORRIDOR, RAISAN VILLAGE, GANDHINAGAR - 382007, GUJARAT, INDIA. -----

2)DR.MANAN SHAH
 Address of Applicant :PANDIT DEENDAYAL ENERGY UNIVERSITY KNOWLEDGE CORRIDOR, RAISAN VILLAGE, GANDHINAGAR - 382007, GUJARAT, INDIA. -----

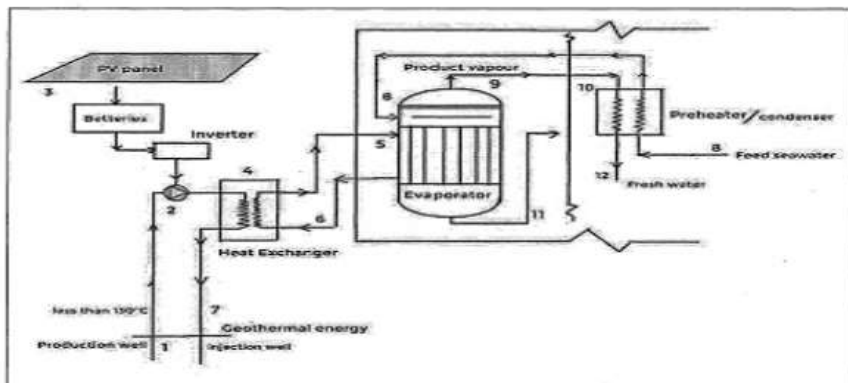
3)MR.MITUL H.PRAJAPATI
 Address of Applicant :PANDIT DEENDAYAL ENERGY UNIVERSITY KNOWLEDGE CORRIDOR, RAISAN VILLAGE, GANDHINAGAR - 382007, GUJARAT, INDIA. -----

4)PROF.ANIRBID SIRCAR
 Address of Applicant :PANDIT DEENDAYAL ENERGY UNIVERSITY KNOWLEDGE CORRIDOR, RAISAN VILLAGE, GANDHINAGAR - 382007, GUJARAT, INDIA. -----

(57) Abstract :

The titled invention of the 'solar geo thermal hybrid desalination system explains about the system of desalination plant using solar geo thermal method. Water is nature's most magnificent and helpful compound, yet it is additionally the most abused one. Without food, humans can manage for different days; however, water is such a fundamental that one can't endure without it. For the most part, the accessibility of freshwater on the earth is in both surface and groundwater. At present, water quality and freshwater are massively declining because of the defilement and effects of atmosphere changes. About 97% of the world's water is salty, and the rest is fresh water. Under 1% of fresh water is accessible for human scopes. To satisfy the demand for freshwater, we need to do desalination of seawater or brackish water. Two most desalination methods used for seawater or brackish water, Thermal or Phase change process which involves, Multi-effect distillation (MED), Multi-stage flash distillation (MSFD), Vapor compressor desalination (VCD), etc. and another one is membrane-based, such as Reverse Osmosis (RO), Electro dialysis (ED) and so forth. In any case, the energy use is high in those processes; that way, we need elective energy sources for driven desalination plants. Sustainable power sources can satisfy the energy necessity for desalination technologies. The primary sources of renewable energy are geothermal, sun-powered, and wind. Low enthalpy geothermal liquid with less than 130 °C temperature is used as a heating medium or heat energy in the desalination of seawater, and solar energy also has the potential to drive the desalination system. The solar-geothermal hybrid system for driving a thermal-based desalination system was outlined.

FIGURE : 1



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