



e-ISSN: 2319-8753 | p-ISSN: 2347-6710

IJRSET

International Journal of Innovative Research in
SCIENCE | ENGINEERING | TECHNOLOGY

INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN SCIENCE | ENGINEERING | TECHNOLOGY

Volume 10, Issue 11, November 2021

ISSN INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA

Impact Factor: 7.569

 9940 572 462

 6381 907 438

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 www.ijrset.com



Productivity Enhancement of Double Slope Solar Still Coupled with Solar System

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ABSTRACT: The world is currently moving towards the renewable energy supply because of varied factors like pollution and price of non-renewable energy sources. one in all the foremost renewable energy sources is Sun. During this project microcontroller based mostly Dual-axis star chase system projected so as to induce most solar power. The controller is employed to provide command to rotate the solar array. Star trackers are wont to improve the facility gain from solar power. Solar energy is changes because of the seasonal variation and tilting of earth that changes the position of the sun within the sky. During this regard twin axis star chase is much enforced. Desalination chemical change\chemical action is most vital and ancient process to induce the potable water. Day to day the demand of contemporary and potable water is exaggerated, so desalination is very important and gained a lot of attention. In typical method desalination\chemical change\chemical action for heating method fuel is employed because the thermal supply however the because of fast decrease within the fuel storage it's necessary to travel with the renewable energy for the desalination process. Historically fuel is employed that emits the pollutants when burning and it's harmful to setting and person additionally. This project proposes of desalination systems that are supercharged by solar power. The star supercharged desalination systems are value effective and additionally provide high rate of water production. The water temperature of water is effects on the daily water production rate, potency of the system and gained output quantitative relation. star supercharged desalination systems aren't commercially used nevertheless, however it's the rising cheap energy is used for desalination in future. Here the water temperature knowledge is monitored and keep in humanoid application backend information.

KEYWORDS: LDR Sensor, DHT11 Sensor, LCD Display, Peltier plate, HC-05 Wireless device

I. INTRODUCTION

The main objective of dual axis solar tracker is to increase the efficiency of the solar panel by 30-45% when compared to the static and single axis solar tracker. To trace more solar power in different location in different time period in a day to get maximum efficiency. To develop the microcontroller based Dual axis solar tracker. The solar powered desalination systems are cost effective and also give high rate of water production.

II. RELATED WORK

The projected system is productivity sweetening of twin axis star huntsman system. It consists of AN microcontroller, LDR, show LCD digital display alphanumeric display } display, servo motor, relay, peltier plate. AN input command is given to the microcontroller. The LDR square measure connected to the sunshine comparison unit. This unit offers signal to the microcontroller. The controller successively command the servo motor to rotate the electrical device in horizontal and vertical position. In this method, LDR square measure mounted to sense the intensity of sunshine. The analog signal from the sensors is given to the in-built ADC (Analog to Digital Converter) and light-weight comparison unit. This output is given as AN input to the microcontroller board beside the input command. The output of the controller is given to the servo motor. Servo motor is connected with the controller, The motor rotates the electrical device perpendicular to the position of sun rays. The chemical change of water victimisation direct solar energy. once the saltwater is heated by radiation, it starts to evaporate and therefore the fashioned vapour is mixed with the air higher than the water surface.

III. METHODOLOGY

The circuit diagram consist the components of core components of pro mini microcontroller, LCD display, 5v regulator, temperature & humidity sensor , dual solar panel , LDR sensor, battery, HC-05 wireless device, servo motor, relay, peltier plate.LCD display connected to controller and its gives details by the controller & display the values.Solar panel is given battery the power can be used for load activating.Power supply is connected to regulator for voltage regulating 12v to 5v then 5v supply is given to pro mini microcontroller. VCC and GND pins are connected to regulator.Temperature & humidity sensor has 3 pins VCC pin is connected to 5v supply. GND pin is connected ground. Digital pin is connected to controller. Pro mini controlled the sensor.LDR sensor connected to pro mini controller. servo motor is connected pro mini microcontroller digital pin for controlling solar panel. Relay is connected to controller for activating the peltier plate.The algorithm automatically generates mask image without user interaction that contains only text regions to be inpainted.

IV. EXPERIMENTAL RESULTS

Figures shows the results of Humidity and Temperature of the solar panel

```
LDR:0
Humidity: 89.00% Temperature: 29.00°C 84.20°F
Heat index: 36.95°C 98.51°F
LDR:761
Humidity: 89.00% Temperature: 29.00°C 84.20°F
Heat index: 36.95°C 98.51°F
LDR:761
Humidity: 89.00% Temperature: 29.00°C 84.20°F
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LDR:761
Humidity: 89.00% Temperature: 29.00°C 84.20°F
Heat index: 36.95°C 98.51°F
LDR:761
```

Fig. 1. The humidity and temperature of the solar panel is displayed

V. CONCLUSION

The promini microcontroller primarily based twin axis star pursuit based solar array for water chemical process is intended and with success enforced to extend the potency of solar array. The projected twin axis star huntsman is simpler than the prevailing single axis star huntsman and stuck mount. The projected star huntsman that mechanically tracks the sun to grab most solar energy with the assistance of microcontroller was effectively achieved. the traditional desalinization chemical change chemical action} systems square measure energy intensive process. alternative energy may be used for chemical process of water as alternative energy is offered in thick, and as its technical feasibility is a lot of. In typical water treatment method, the fuel consumption is a lot of, therefore for avoid this star steam-powered chemical process gain a lot of attention, as sources of fuel square measure restricted. the assembly rate of water by exploitation star steam-powered desalinization chemical change chemical action is a lot of as compared to the traditional water chemical process.

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