

Application of solar automatic tracking system



Overview

What is automatic solar tracking?

The main aim of any automatic STS is to maximize the amount of sunlight that the solar concentrator or module will receive, resulting in the maximization of the overall energy outputs of the system. Solar tracking can be performed in two ways: single-axis tracking and double-axis tracking.

What are the applications of solar tracking system?

The main application of solar tracking system is to position solar photovoltaic (PV) panels towards the Sun. Most commonly they are used with mirrors to redirect sunlight on the panels. Cross-Reference: Design and Implementation of High Efficiency Tracking System.

What is a solar tracking system?

A solar panel precisely perpendicular to the sun produces more power than one not aligned. The main application of solar tracking system is to position solar photovoltaic (PV) panels towards the Sun. Most commonly they are used with mirrors to redirect sunlight on the panels.

Why should you use a solar tracker?

By utilizing a solar tracker, the number of solar panels needed to generate the same amount of electrical energy will be significantly lower. In general, solar tracking systems are classified as single-axis solar tracking systems and dual-axis solar tracking systems.

Are automatic solar trackers effective?

Currently, research into automatic solar trackers is on the rise, as solar energy is abundant in nature, but its use in a highly efficient way is still lacking. This paper provides a detailed literature review and highlights some key advancements and challenges associated with state-of-the-art automatic solar tracking systems.

What is solar photovoltaic tracking technology?

Solar photovoltaic tracking technology will play a pivotal role in global energy production, fostering the realization of a clean and sustainable energy future. A prototype control system for a PV power plant was constructed with the movement following the position of the Sun, where the position control takes place in two planes.

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