

FABRICATION OF SOLAR OPERATED SPRAYER

ABSTRACT

Solar Sprayer is the pumping facility driven by solar energy, Solar sprayer is called solar pumping system combining with solar arrays designed according to different head and daily water flow for application. System is widely utilized for agriculture irrigation, Sprayer for pesticides, daily water supply, etc.

In recent years, the solar sprayers are usually used for spraying pesticides to crops and plants.

Solar sprayer driven by infinite solar energy, works from sunrise, and stops at sunset, need no connection to grid power nor diesel oil and battery. System can irrigate directly or store water instead of electricity in a reservoir. Solar sprayers works with sprinkling irrigation, drip irrigation and infiltrating irrigation facilities, can be more efficient for water saving and dramatically lower the cost of using fossil energy.

Solar sprayer is a pumping device powered by solar energy, consists of a solar pumping inverter and a deep well pump, mainly used for agriculture irrigation, desert control, pasture animal husbandry, city waterscape, seawater desalination, living water supply and so on. Use solar energy, need no connection to grid. Automatically operation, maintenance free. Easy to install and move, high universality. Clean and green, high economic benefits.

APPLICATIONS

Water pumping -Solar PV water pumping systems are used for irrigation and drinking water in India. The majority of the pumps are fitted with a 200 watt - 3,000 watt motor are powered with 1,800 Wp PV array which can deliver about 140,000 liters of water/day from a total head of 10 meters.

Oil and gas -In order to combat negative publicity related to the environmental impacts of fossil fuels, including fracking, the industry is embracing solar powered pumping systems. Many oil and gas wells require the accurate injection (metering) of various chemicals under pressure to sustain their operation and to improve extraction rates. Historically, these chemical injection pumps (CIP) have been driven by gas reciprocating motors utilizing the pressure of the well's gas and exhausting the raw gas into the atmosphere. Solar powered electrical pumps (solar CIP) can reduce these greenhouse gas emissions.

TECHNOFIST