Patents offered for Licensing

Mahmoud Ahmed Saad

Electrical Installation Engineer

E-mail: masd.tiger9@gmail.com
Whatsapp: +201010719032

Thermal Solar power panels for Generating Electricity (IDEA)

- **It is a pending patent in Egypt with number EG/P/2023/943**
- My invention is called thermal solar panel as it uses the sun's heat and transforms it to electricity. It consists of 3 main parts:-

1- Heat absorber: it is a chemical material such as paraffin wax or iron powder that absorbs sun’s heat and increases its temperature and maintains it for a long time to be used at night.

2- power electronic device: it is an electronic device that can transform heat energy into electrical energy if it is supposed to temperature difference on its two faces.

3- Coolant: it is used to cool the power electronic device and create temperature difference on the power electronic device and the coolant can be natural air, hydrogen or nitrogen. It flows in pipes similar to that used in refrigerators.

Continue: Thermal Solar power panels for Generating Electricity (IDEA)

- The basic idea of the thermal panel that sun's heat is collected by heat absorber which is iron powder then its temperature is increased and iron powder touches power electronic device from one side and the other side touches pipes which natural air/or nitrogen flows inside it to cool power electronic device to protect it from high temperature and to make temperature difference that generates electricity.
- The dimensions of thermal panel modules are 1 m * 1 m = 1 m2.
- It can contain nearly 600 pieces of power electronic device and it can generate 3 KW and more for the same size of normal PV (which produces 1 KW for every 10 m2).
- We can notice that our thermal panel is 30 times more powerful than normal PV.

Thermal Solar power panels for Generating Electricity (Technical problem)

1. Photovoltaic systems for electricity production are low in efficiency, low in electricity production and high in price.
2. Thermal power towers have low efficiency, require very large areas and have many faults.
3. Photovoltaic systems do not work in the shade and may even burn out, and their production is very low on non-sunny days. As for thermal energy towers, they are only suitable for use in deserts, which means that only a few countries can benefit from them and they cannot be used to produce electricity in homes.

Thermal Solar power panels for Generating Electricity (Advantages)

It has some excellent features:

- 1- Using the sun's heat, not light, to generate electricity using an electronic heat exchanger.
- 2- Using the invention to increase the efficiency of electricity production plants, especially nuclear plants.
- 3- Using the invention to reduce the consumption of water used in the production of electricity.
- 4- Use the device to reduce global warming.
- 5- The device consists of three elements, namely, the heating material, the cooling material, and the electronic element.
- 6- The device generates electricity from the heat of the sun or water vapor and has condensing panels to convert steam into water and use it again.

Thermal Solar power panels for Generating Electricity (Areas of implementation)

- . My thermal panel has the feature to work 100% at night as it has a heat absorber that can maintain heat for a long time. My thermal panels can be installed anywhere such as on roofs, in farms, in factories that produce heat etc. Moreover, I need to say that this idea can be modified to work for batteries & capacitors and event with PV to increase its efficiency.

Thermal Solar power panels for Generating Electricity (Operation diagram)