## AMENDED CLAIMS

1.- Cooling system (1) for photovoltaic solar panels (2), of the type that are installed in an inclined position with respect to the horizontal plane for optimal solar radiation capture, ~~characterized in that it~~ said cooling system (1) comprisinges~~~~:

- fluid sprayers (10) arranged on the upper edge of the PV panels (2) for supplying a sheet of fluid over their outer surface,

- a collection tray (20) fixed to the lower edge of the PV panels (2) to collect and channel the excess fluid coming from said outer surface of the PV panels (2),

- a drain hose (30) linked at one of its ends to the collection tray (20) to extract the fluid housed therein,

characterized in that the cooling system (1) further comprises:

- a first tank (40) arranged outdoors for storing and cooling the fluid extracted through the drain hose (30), and

- a second ~~thermally insulated~~ tank (50) ~~that is suitable~~ for receiving the low-temperature fluid coming from the first tank (40) by means of an electric pump (60), wherein said second tank (50) is thermally insulated so that the fluid does not experience significant temperature variations for the longest possible time in order to be recirculated back to the fluid sprayers (10), said second tank (50) having an outlet duct (51) for recirculating the fluid towards the fluid sprayers (10) of the PV panels (2).

2.- Cooling system (1) for photovoltaic solar panels (2) according to claim 1, characterized in that it additionally comprises a standalone solar panel equipment (70) for the additional power supply of the electric pump (60).

3.- Cooling system (1) for photovoltaic solar panels (2) according to claim 1, characterized in that the fluid sprayers (10) are located on an elongated common rod (11) installed along the upper edge of the PV panels (2).

4.- Cooling system (1) for photovoltaic solar panels (2) according to any one of claims 1 or 3, characterized in that the fluid sprayers (10) are sprinklers, micro sprinklers, drip sprayers, sheet sprayers or the like.

5.- Cooling system (1) for photovoltaic solar panels (2) according to any one of claims 1, 3 or 4, characterized in that the fluid sprayers (10) additionally comprise flow rate regulating means.

6.- Cooling system (1) for photovoltaic solar panels (2) according to claim 1, characterized in that the electric pump (60) is a combined, lift-force pump.

7.- Cooling system (1) for photovoltaic solar panels (2) according to any one of claims 1 or 6, characterized in that the electric pump (60) is associated with a control unit managing the power supply to be provided to the pump (60).

8.- Cooling method for photovoltaic solar panels~~, characterized in that it~~ said cooling method comprises the following steps:

- outflow of fluid over the outer surface of the PV panels (2) from fluid sprayers (10) located on the upper edge thereof,

- collecting and channeling the excess fluid in a collection tray (20),

- extracting the fluid housed in the collection tray (20) by means of a drain hose (30),

characterized in that the cooling method further comprises:

- storing and cooling the extracted fluid in a first tank (40) located outdoors until said fluid reaches a minimum temperature,

- pumping the fluid once it is cooled to a second ~~thermally insulated~~ tank (50), said second tank (50) being thermally insulated so that the fluid does not experience significant temperature variations for the longest possible time, and

- recirculating the fluid from the second tank (50) towards the fluid sprayers (10) of the PV panels (2), said panels (2) being cooled based on the outside temperature at the most favorable time of day, in particular when the outside temperature is the minimum temperature.

9.- Cooling method according to claim 8, characterized in that the step of storing and cooling the fluid in the first tank (40) is performed until the time of day with the lowest outdoor temperature.

10.- Cooling method according to claim 8, characterized in that the step of recirculating fluid is performed by means of draining by gravity.