Title (en)

IMPROVING THE LONGEVITY AND ERGONOMICS OF HYBRID SOLAR MODULES

Title (de)

VERBESSERUNG DER LANGLEBIGKEIT UND ERGONOMIE VON HYBRIDEN SOLARMODULEN

Title (fr)

AMELIORATION DE LA LONGEVITE ET DE L'ERGONOMIE DES MODULES SOLAIRES HYBRIDES

Publication

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Application

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Abstract (en)

[origin: WO2013010922A1] At best, photovoltaic solar modules only convert 20 % of solar energy into electrical energy, the rest of this energy being dissipated. This heat stored in the photovoltaic module reduces efficiency, which decreases in an inversely proportional manner to the temperature of the photovoltaic module. To dissipate and recover this heat, it is common to associate the photovoltaic module with a heat exchanger which, in addition to cooling the photovoltaic module, will supply heat, for example to heat the sanitary water of a building. This assembly forms a hybrid solar module, whose main limitation is its weight and relatively short service life. The invention described in the present document solves these two problems by replacing the first layer of the hybrid solar module, which is conventionally a glass sheet, with a material which is lighter, less rigid, more transparent, and more compatible with the material from which is constructed the heat exchanger, which now provides the system with its rigidity. A method for manufacturing these hybrid solar modules is also described.

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