Pemodelan analisis termaldestilasi air energi surya dengan kaca penutup berpenampung air / Doddy Purwadianto, Wibowo Kusbandono, FA. Rusdi Sambada

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Abstrak

ABSTRACT
A common way to increase the efficiency of distillation of solar energy is by cooling the cover glass. The method of cooling glass that is widely studied is the spray method. Spray method still has a weakness that is not the entire surface of the glass can be wetted cooling water. The water reservoir method allows wettage of the entire surface of the cover glass so that the cooling process can be better. This study aims to increase the efficiency of the distillation of solar energy water by cooling the cover glass using a water reservoirs method. Parameters varied during this experimental stage are: the cooling water mass rate. Parameters measured were: (1) absorber temperature, (2) cover glass temperature, (3) cooling water temperature, (4) input water temperature, (5) ambient air temperature, (6) distilled water, (7) solar energy coming and (8) data recording time. The conclusions of this study were: the largest distillate water yield obtained was 3.26 liter / (hari.m2) with an average efficiency of 41.0%. Distilled water yield and best efficiency are obtained at cooling water rate of 7.1 liter / hour. The temperature difference between the absorber and the largest glass is 11.4°C