

Investigation of Double Slope Solar Distillation Efficiency Using Heat Absorber Made from Zinc

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Abstrak

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The productivity of water treatment through distillation method was studied by varying the size of the zinc heat absorber in a solar-based distillation unit. An additional zinc heat absorber was proposed to improve the efficiency of the distillation unit. This research investigates the usage of zinc heat absorber with size 10 to 90% of water surface area. The temperature at various locations inside the distillation unit was monitored throughout the operation in order to obtain data necessary for the equation engineering solver method, which was conducted to calculate the efficiency that is 10% of the water area produced 1.43 liters of condensed product per day providing efficiency of 25.99%. The efficiency reduced significantly to 15.02% when the size of the heat absorber was increased to 90%.