

**Study Of The Effect Of Flow Variation On Monocrystalline Solar Panel
Immersion Cooling**

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ABSTRACT

Solar Power Plant (PLTS) is an EBT that utilizes solar irradiation to be converted into electrical energy. The sun's heat will affect the temperature of the solar panel while the temperature is inversely related to the output power of the solar panel. This study aims to analyze the effect of using flow on the immersion cooling technique of Monocrystalline 20Wp solar panels and to analyze the comparison results of flow variations without cooling and with cooling of monocrystalline 20Wp solar panels. The coolant used is mineral oil with flow variations of 4 LPM, 6 LPM and 8 LPM. The results showed that the smaller the variation tested, the greater the output power produced. The average output power of solar panels with the 4 LPM variation is 5.55 Watt, the 6 LPM variation is 4.80 Watt, and the 8 LPM variation is 3.75 Watt. The best average output power produced by solar panels without cooling is on the 4 LPM test, which is 5.56 Watts, while the lowest output power is on the 8 LPM test, which is 3.76 Watts. The output power of solar panels without cooling is greater than the output power of solar panels with cooling.

Keywords: *monocrystalline, cooling, output power*