

**Rancang Bangun Kompor Listrik Tenaga Surya Berbasis Mikrokontroler Dengan Memanfaatkan Busi *Glow Plug* Sebagai Pemanas.** Pembimbing : Ahmad Fahriannur, S.T., M.T. (*Design of Solar Electric Stove Base on Microcontroller Using Glow Plugs as a Heater*). Supervised by : Ahmad Fahriannur, S.T., M.T.

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### ***ABSTRACT***

*This study aims to determine the comparison of heating time with temperature on solar electric stoves and LPG stoves. In addition, this study also aims to prevent accidents due to leakage of LPG gas cylinders. The mechanical design of this solar electric stove uses a bus glow plug and nickelline wire which functions as a heater. The results obtained are that the process of heating air with a volume of 500 ml using a solar electric stove takes 22 minutes 7 seconds with a maximum temperature of 85 °C. The power measured during the heating process is 264 watts with a voltage of 12V and a current of 22A. The power comes from 3 glow plug spark plugs, each of which has a power of 24 watts and a 50 cm long nickelinel wire with a power of 78 watts. In addition, the results obtained are relatively stable currents because the main supply of solar electric stoves comes from batteries with a charging system using solar power plants (PLTS). This PLTS system uses a long irradiation time of 1.36 hours according to the average time used for cooking.*

*Key Words : Glow Plug, Nickelline Wire, PLTS, Solar Electric Stove, Temperature.*