

ABSTRACT

In this research, a magnet-based stirrer and fluid heating system using a microcontroller is tested. The aim of this research is to determine the effect of fluid viscosity towards fluid rotation velocity and also to determine the effect of stirring speed towards fluid heating. The tests conducted are stirrer testing and heater testing. The stirrer testing will be done by rotating the fluid with different viscosity and get the value of the rotation speed of the fluid, while the heater testing will be done by heating the fluid with different viscosity and observing the fluid temperature change. Based on the calculation of the result data of stirring test after being converted into the formula, variety errors are obtained, so the method of fluid rotation with stirrer is not recommended to measure the viscosity of a liquid.

Keywords: microcontroller, fluid rotation, heater, viscosity, temperature.