

## **ABSTRACT**

Problems that could be dealt with Finite Element Method is heat transfer. In order to find the heat transfer of an object, we need to find the heat distribution first, and then calculate the heat intake, outtake and the stress.

In this final project, the object is burner cylinder from plastic waste processor that works through distillation. The cylinders that will be simulated are made from aluminum and have a conducted distribution of temperature. The simulation is done in one and two dimensionally. Heat conduction with Finite Element Method will be done on Time Dependent condition. Time Dependent is use because the cylinder will be burned depends on the stated time.

The result of this research is one and two dimensionally heat conduction simulation including parameters, boundary condition and a predetermined time. The simulation is expected to determine the temperature distribution of each point that has been divided into several elements of the entire surface time and temperature distribution in each time.

**Keywords:** Heat transfer, Finite Element Method, Heat Conduction, Time Dependent.