ABSTRACT

We all know that the COVID-19 pandemic is happening in all corners of the world and is certainly causing the demand for medical equipment to increase sharply. One of the medical devices that are urgently needed for healing COVID-19 sufferers is a ventilator, even today there are also many health agencies. who lack this vital tool which is used to support the breathing of patients who generally have difficulty in breathing. This shortage of ventilators is the goal of the research that the authors are doing with the hope that this research can play a role in the manufacture of low-cost ventilators specifically for COVID-19 patients that can help demand in the market.

In this final project the author designed a system on a ventilator that can determine the pressure value, where there are 2 types of pressure measured, namely Peak Inspiratory Pressure (PIP), and Positive end-expiratory pressure (PEEP). The study uses the MPX5010DP sensor which is connected to a Hamilton flow sensor which is connected directly to the ventilator, then the data obtained will be displayed on the LCD.

The results obtained in this study obtained Peak Inspiratory Pressure (PIP) and Positive end-expiratory pressure (PEEP) values, both of which were compared with standardized data at BALAI PENGAMANAN FASILITAS KESEHATAN (BPFK). With an error value of 7.5617% for PIP and 125% for PEEP.

Keyword: *ventilator, COVID-19, pressure*