ABSTRACT

The mode of transportation in this modern era is growing rapidly which demands that everything be better, one of which is the train transportation mode, which is mostly used by the community to support their daily activities. In practice, the train still experiences many problems, one of which is that there are still accidents due to a failure in the train braking system which results in material damage, loss of life, etc. Braking on a train aims to slow or stop the train in accordance with its function as a transportation system. To carry out this function, a reliable braking mechanism is needed which consists of several assembled components that each have specifications, functions and how they work. One of the air pressure in the compressed air braking system that cannot be monitored directly / real-time

The Air Pressure Monitoring System for Train Braking is designed by utilizing a microcontroller connected to the MPX5500DP sensor. The MPX5500DP sensor is attached to the air tank tube / Auxiliary Reserlvoir aims to monitor air pressure for the train braking system.

The proposed research produces a Microcontroller-based Air Pressure Monitoring System for Train Braking. Applications that are designed can determine the air pressure in the air tank / auxiliary reservoir tube. The average delay is 13.392 seconds for the process from reading the MPX5500DP sensor to firebase. With a valid level of data has an average difference of 0.34 bar. From this data, this final project can perform a real-time air pressure monitoring system.

Keywords: Brake Cylinder, monitoring system.