ABSTRACT

AGV (Automated Guided Vehicle) is an intelligent vehicle used in the distribution system to deliver the product from one place to other place by using a microcontroller as the controller. AGV is generally designed by using the motor as a driver and steering on each wheel. It is causing the wasteful use of a motor because it requires a lot. In addition, motor control, especially for stability in order to move deflection optimal AGV becomes more difficult. This is because the microcontroller must balance each motor rotation there with a lot of factors that make it difficult to balance the motor so that the turning of AGV becomes less accurate.

This final project will discuss about the development of the AGV control system which is devoted to the turning control of the AGV using Fuzzy Logic. This turning control system will be developed on the AGV to be shaped like a car in which there are two wheels that will determine the direction of the AGV is driven by a stepper motor controlled using a microcontroller. This system is intended to improve the ability, stability, and accuracy AGV when turning and smooths the flow of AGV. Application of this system also takes into account the distance between the axis of the drive wheels with steering wheel. It is intended to maintain the accuracy and stability of the AGV when turning at a constant speed.

From the test results obtained AGV deflection movement that occurs quite good. With an average error on the right wheel is 0.84°an the left wheel is 0.91° with a fairly constant speed which moves in accordance with the PWM that has been set.

Keywords: Automated Guided Vehicle, AGV Turning Control Systems