

ABSTRACT

The wiper tank is part of a car wiper system that functions as a storage area for windshield cleaning fluid, but the wiper tank does not yet have a sensor to detect the water capacity in the wiper tank. This research will analyze the performance of the HX711 loadcell sensor with the object used, namely the car wiper tube on a moving vehicle. This research was conducted to determine the performance of the loadcell sensor when used on a moving vehicle, as well as knowing the amount of accuracy and error values read by the sensor. This research uses NodeMCU8266 microcontroller as data processing, 16x2 LCD and SD card module as display output and data storage. In this study there are 4 test conditions with damaged road conditions at a speed of 10km / h and good road conditions with speeds of 10km / h, 40km / h, 60km / h, with a testing weight of 2000ml wiper tank. In these 4 test conditions, the lowest accuracy result was 91.25% on damaged roads with a speed range of 10km / h, and the highest accuracy was 99.56% on good roads with a speed range of 10km / h, on good roads with a speed of 40km / h, 97.14% accuracy was obtained and on good roads with a speed of 60km / h, 96.5% accuracy was obtained. This shows that the sensor can be said to be very sensitive to shocks / movements.

Keywords: *Load Cell HX711, 16x2 LCD, SD Card Module, NodeMCU ESP8266, Wiper Tank*