

ABSTRACT

Oxygen is a major component of human life. The use of oxygen that occurs in hospitals provides less transparency to the patient. Based on the findings of the field at the time of the author doing field work practice in dr. Iskak Tulungagung in August 2016 that the hospital as a provider of health services in the form of medical gas oxygen, there is a problem faced is the determination of the tariffs to each patient who uses oxygen gas. The amount of tariffs so far only through manual recording of the duration of the use of oxygen medical gas. This way of working can lead to less transparency about the volume of oxygen gas usage. The preparation of this module is expected to identify the amount of oxygen gas volume usage and the time of use of the oxygen medical gas since it was first installed until its use was completed, so that the use of oxygen gas can be measured volumes transparently and accurately. This research method using Pre Experimental with research type One Group Post Test Design. Calculation of total volume and tariff load in this module use equation of function $y = 0.0023x^2 + 0.2515x + 0.6122$, controlled by ATmega16 microcontroller. Results of data collection at stream rate setting at 2L / min, 4L / min, 8L / min, 10L / min and 15L / min with comparison of calibration result by PT. SMS, there is an average relative error of 4.30% and in the module of 5.74%, so the difference is 1.40%. This means that the tool is declared viable because it is within the permitted tolerance limit (10%).

Keywords : *Tariff Charges, Oxygen Gas, Microcontroller ATmega16.*