

ABSTRAK

Oxygen Analyzer merupakan alat ukur kadar oksigen dalam suatu gas. Dalam bidang kesehatan Oxygen Analyzer difungsikan untuk mengukur kadar gas oksigen pada Tabung Oksigen, Outlet Gas Medis, Alat Terapi Oksigen, Continuous Positive Airway Pressure (CPAP), Ventilator. Adapun dalam perkembangannya oksigen analyzer selain berbasis galvanic juga ada yang berbasis ultrasonic.

Pada penelitian ini penulis melakukan penelitian eksperimen dengan membandingkan unjuk kerja oksigen berbasis galvanic dengan oksigen berbasis ultrasonic. Penulis menggunakan oksigen analyzer berbasis galvanic CY-12C dan oksigen analyzer ultrasonic dengan sensor tipe Gasboard7500C serta sebagai pembanding menggunakan oksigen analyzer verifikasi.

Pengujian dilakukan dengan membandingkan oksigen analyzer berbasis galvanic dan oksigen analyzer berbasis ultrasonik dengan alat ukur standar yaitu oksigen analyzer verifikasi. Setelah dilakukan pengukuran dan pengujian dapat disimpulkan bahwa alat oksigen analyzer, nilai Flow dan waktu mempunyai pengaruh terhadap nilai tampilan konsentrasi O₂ serta daya tahan nilai pengukuran secara total. Daya tahan oksigen analyzer berbasis ultrasonic lebih tinggi dibandingkan dengan daya tahan oksigen analyzer berbasis galvanic, hal ini dibuktikan dengan nilai total mean pengukuran oksigen analyzer berbasis ultrasonic sebesar 91,4061% sedangkan nilai total mean pengukuran oksigen analyzer berbasis galvanic sebesar 81,0411%.

Kata Kunci : Oksigen analyzer galvanic, Oksigen analyzer ultrasonic, Flow, Waktu.

ABSTRACT

The Oxygen Analyzer is an oxygen level meter in a gas. In the health field the Oxygen Analyzer is used to measure oxygen gas levels in Oxygen Tubes, Medical Gas Outlets, Oxygen Therapy Devices, Continuous Positive Airway Pressure (CPAP), Ventilators. As for the development of oxygen analyzers other than galvanic based, there are also ultrasonic based ones.

In this study the authors conducted an experimental study by comparing oxygen-based oxygen performance with ultrasonic-based oxygen. The author uses CY-12C galvanic based oxygen analyzer and ultrasonic oxygen analyzer with Gasboard7500C type sensor and as a comparison using oxygen analyzer verifier.

The test is carried out by comparing a galvanic-based oxygen analyzer and an ultrasonic based oxygen analyzer with a standard measuring device namely oxygen analyzer verifier. After measurement and testing, it can be concluded that the oxygen analyzer, Flow value and time have an influence on the O₂ concentration display value and the total durability of the measurement value. The durability of the oxygen analyzer based on ultrasonic is higher than that of the galvanic-based oxygen analyzer, this is evidenced by the mean total value of ultrasonic based oxygen analyzer measurement of 91.4061% while the mean total value of the measurement of galvanic-based oxygen analyzer is 81.0411%.

Keywords: *Oxygen galvanic analyzer, Oxygen analyzer ultrasonic, Flow, Time.*