EXERCISE BIKE ELECTROLYSER AS THE HYDROGEN PRODUCTION SYSTEM

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In this study, the exercise bike electrolyser as the hydrogen production system is discussed. The objective of this study is to design and construct a model of exercise bike electrolyser and to analyze the efficiency of the exercise bike electrolyser as the hydrogen production system. The bicycle is pedalled for 30 minutes and the voltage and hydrogen gas produce is analyzed. Result shows that maximum voltage produce is 0.87V and average voltage produce is 0.75V. There are no hydrogen produce due to low electric current produce and high overpotential of iron nail electrode. As a conclusion, the system is inefficiently to produce hydrogen.
Dalam kajian ini, basikal senaman elektroliser sebagai sistem pengeluaran hidrogen dibincangkan. Objektif kajian ini ialah untuk merekabentuk dan membina sebuah model basikal senaman elektroliser dan untuk menganalisis kecekapan daripada basikal senaman elektroliser sebagai sistem penghasilan hidrogen. Basikal dikayuh selama 30 minit dan voltan bersama dengan gas hydrogen yang terhasil dianalisis. Keputusan menunjukkan bahawa hasil voltan maksimum adalah 0.87V dan hasil voltan purata adalah 0.75V. Analisa menunjukkan hidrogen tidak dihasilkan kerana penghasilan arus elektrik yang rendah dan lebihan voltan elektrod paku besi yang tinggi. Sebagai kesimpulan, sistem ini tidak cekap untuk menghasilkan hydrogen.
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5.1 Conclusion

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Design and realization of a 300 W fuel cell generator on an electric bicycle:


