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FUEL CELL TECHNOLOGIES AND POWER ELECTRONIC INTERFACE: A REVIEW

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ABSTRACT

Because of growing power consumption, the volatility of rising oil costs, and environmental concerns, renewable energy is becoming more important. Fuel cells are becoming increasingly popular amongst renewable energy owing to their greater efficiency, cleanliness, and cost-effective power supply desired by customers. This article provides a thorough examination of several fuel cell technologies, including their operating principles, benefits, drawbacks, and appropriateness for residential/grid-connected systems, transportation, industry, and commercial applications. It is explained how to create a mathematical model of a fuel cell that will be used in a simulation research. The need for a suitable power-conditioning device to connect the fuel cell system with self-contained applications is also discussed in this article.

KEYWORDS: *Converter, Distributed Generation, Power-Conditioning Units, Renewable Energy, Sources Fuel Cell Systems.*

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