

AN APPLICATION OF THE FINITE-ELEMENT METHOD TO DESIGN A SWITCHED RELUCTANCE MOTOR

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Abstract: *The aim of this paper is to describe some aspects of the switched reluctance motor emphasising the topics of interest to the engineers who work with electric machines, power electronics and control and considering that there is yet few works related to this subject in our country.*

The paper shows the development steps of a switched reluctance motor prototype with 3 phases, 6 stator poles and 4 rotor poles, the use of the finite-element method to conduct a design optimisation, some results and a description of the adopted converter and control scheme.

This paper shows the activities developed to study some aspects of a switched reluctance motor by using the finite-element method coupled with circuit equations, implemented by the software FLUX2D. The drive is of the asymmetric half-bridge type and the aim of this paper is to discuss some important aspects of this modeling.



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ABSTRACTS

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