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Title: IP Controller Based Vector Control of Induction Motor Taking Core Loss into Account

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Published Journal Name: IEEJ Transactions on Electrical and Electronic Engineering

Type of Publication: Transactions

Volume: 1 Issue 1

Publisher: John Wily and Sons, Inc.

Publication Date: 30 May 2006

ISSN: 1931-4973

DOI:

URL: <https://doi.org/10.1002/tee.20027>

Other Related Info.: Page 121-125

Citation: Mohammad Abdul Mannan, T. Murata, J. Tamura and T. Tsuchiya, “IP Controller Based Vector Control of Induction Motor Taking Core Loss into Account”, IEEJ Transactions on Electrical and Electronic Engineering (published by John Wily and Sons, Inc. ISSN 1931-4973), Vol. 1, No. 1, pp.121-125, May, 2006.



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Abstract:

This paper presents speed and current control of the induction motor (IM) taking core loss into account based on integral plus proportional (IP) control strategy. The proposed IP controller can overcome the problems (such as overshoot, instability under the variations of parameters and load torque) of the conventional PI controller. The performance of the proposed IP controller and PI controller is compared. The performance comparison of the IP controller and the PI controller is verified by using Matlab/Simulink.

Keywords: Induction motor, Core loss, Vector control, Speed control, Current control, IP controller