Abstract

Induction motors are the workhorses of industries. Indirect vector control scheme has been preferred due to its superior dynamic performance. Since the conventional PI controller has bounded operating limits and poor transient response, a search for an alternative controller arises. Recently, Artificial Neural Network (ANN) is gaining momentum as a controller for non linear systems. Herein an artificial neural network controller has been designed for a vector controlled induction motor drive. The complete drive system is modeled in Matlab / Simulink. The drive results have been analyzed for both steady state and dynamic conditions. The results are presented with the traditional PI controller and the proposed ANN controller. It is evident from the results that the proposed ANN controller gives promising results.

References

- Baburaj Karanayil, Member, IEEE, Muhammed Fazlur Rahman, Senior Member, IEEE, and Colin Grantham Online Stator and Rotor Resistance Estimation Scheme Using Artificial Neural Networks for Vector Controlled Speed Sensorless Induction Motor Drive –IEEE
Index Terms

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