Design and Implementation of a Multi-Phase Induction Machine Operating in generating Mode for Power Generation

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Abstract

Self-excited induction generators are increasingly being used in remote areas to generate electrical power from both conventional and nonconventional energy sources. This paper investigates a multi-phase self excited induction generator designed for its six-phase operation. Evaluations were made out on the basis of the machine performance which includes voltage and current characteristics at different conditions. The model used for analyzing the machine behavior has two three phase winding sets. In this paper the analytical modeling of a self excited induction generator operating in six phase mode has been made and the analysis of the machine has been carried out with symmetrical phase displacement between the six stator windings. The dynamics of the self excitation process of the six phase self-excited induction generator has been made which was simulated and analyzed.

References

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Index Terms

Computer Science

Power Systems

Keywords

Multiphase; Self-excited induction generator; Analysis.