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# 变速恒频航空电源系统仿真和实验研究

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# SOME SIMULATING AND EXPERIMENTAL PROBLEMS OF THE VSCF ELECTRICAL POWER SYSTEM

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摘要 以六相交流发电机、交-交变频器、滤波和反馈回路构成的航空变速恒频(Variable Speed Constant Frequency简称VSCF)电源系统可通过电机学理论和电路基本定律建立状态变量法的数学模型,用计算机实现系统工作过程的模拟,从而得到各物理量之间的关系。叙述了系统建模过程,给出了较为详细的微分方程表达式。本文对系统模拟、实验中的几个问题作进一步的分析。为便于讨论,所用符号、术语和文献[4]一致。

关键词:

Abstract: The model of the VSCF (Variable Speed Constant Frequency) electrical power system is built. Tn this paper, some problems in the model construction, process simulation and experiments have been discussed and analysed in detail. They include the structure of feedback circuits, the form of reference wave and the solution of system equations, which are all connected with the system model. The results are useful for the system design and study.

Keywords:

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