论文

多线圈耦合电路的回路分析

雷海亮

山东工业大学电力系 济南

摘要
本文从互感支路的伏安关系出发, 导出了多线圈耦合网络具有理想电流源支路时的回路方程。方程的个数为独立回路数减去理想电流源支路数。建立方程的工作量与不具有互感电路情况大致相等。与一般节点法相比, 在建立方程中不必求电感支路的电感逆矩阵; 与改进节点法相比, 一般情况下, 方程的个数要少。本文建立的方程特别适用于具有大量多线圈偶合网络的分析。

关键词　<u>电路理论</u>　<u>互感电路</u>　<u>回路分析</u>

分类号

LOOP ANALYSIS OF THE MULTI-WINDING COUPLED CIRCUIT

Lei Hailiang

Shandong Polytechnic University Jinnan

Abstract
Based on the *V-I* characteristics of the mutual inductance branch, the loop equations of the mutual inductance circuit with the branch consisted of ideal current source along are derived. The number of the loop equations equals the number of the independent loop minus the numher of the branch consisted of ideal current source alone. The amount of work done for deriving the loop equations is the same as that for the circuit without mutual inductance. As compared with general node approach, presented method needs not use the inverse matrix of inductance. And in general, the mumber of the loop equations derived by this method is less than that derived by use of the modified node approach.

Key words　<u>Circuit theory</u>　<u>Circuit of mucual Lnductance</u>　<u>Loop analysis</u>

DOI :

扩展功能

本文信息

▸ Supporting info

▸ PDF(1013KB)

▸ [HTML全文](0KB)

▸ 参考文献[PDF]

▸ 参考文献

服务与反馈

▸ 把本文推荐给朋友

▸ 加入我的书架

▸ 加入引用管理器

▸ 复制索引

▸ Email Alert

▸ 文章反馈

▸ 浏览反馈信息

相关信息

▸ 本刊中 包含"电路理论"的 相关文章

▸本文作者相关文章

· 雷海亮