Permanent Magnet Electric Machinery Design Toolbox

Track Code: 2016-SUDH-67283

Categories:
- Computer Technology
- Electrical Engineering

Keywords:
- Computer Technology
- Electrical Engineering
- Magnetics
- MATLAB

When conducting research and laboratory experiments in a field, expensive, large-scale or unobtainable equipment may be required. These necessities of experimentation limit the potential for further discover and the ability for researchers to conduct their work unrestricted. In this way, in depth computer technologies and simulators are ideal solutions to equipment or scaling issues during research. Research can be conducted and analyzed through simulation programs easily where normal means require heavy duty machinery or tools.

For these reasons, researchers at Purdue University have developed a Permanent Magnet Electric Machinery Design Tooolbox 4.0 (PM EMDT 4.0) in order to facilitate the design of permanent magnet ac machines via MATLAB. Loosely developed through the text, Power Magnetic Devices: A MultiObjective Design Approach, this technology has been in development over a decade and is the first 'official' version supported with a manual. The program utilizes MATLAB to develop simulations for surface mounted permanent magnet machines. Although this version requires the use of an optimization engine, it offers old, new, and enhanced routines, all divided into five easy-to-use command groupings. •

Advantages:
- Organized easy-of-access™™™•
- Obtainable™™™™™™™
- Applicable™

Applications:
- Project designing™™™™™™™
- Simulations™™™™™™™•
- Learning tool™™™™™™™
- Reference

People:

- Sudhoff, Scott D (Project leader)

Intellectual Property:

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