



## Design of Rare-Earth Permanent Magnets (Repm) and Magnetic Circuits (Paperback)

By H A Leupold, Ernest Potenziani

Wexford College Press, United States, 2007. Paperback. Book Condition: New. 226 x 145 mm. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*.The advent of rare-earth permanent magnets (REPMs) has brought the realization of novel magnetic structures that are not practicable otherwise. So different are these remarkable materials from the earlier magnets that conventional design wisdom is inadequate to fully exploit their unique characteristics. Indeed, the conventional wisdom can lead to error or to the employment of cumbersome procedures that are quite unnecessary for REPMs. The salutary characteristics stem from two basic attributes of the rare-earth materials: 1) large intrinsic moments per unit volume; 2) extraordinarily high resistance to demagnetization by external or internal demagnetization fields. Chapter titles are .(1) Introduction .(2) Magnetic Circuit Design [subsections are: Magnetic Analogue to Ohm s Law, Example of Magnetic Gap Field Calculations, Flux Confinement by Cladding, Clad Permanent Magnet Solenoids] .(3) Linear Structures Composed Entirely of Rigid Permanent Magnets .(4) Flux Confinement to Polygonal Cavities .(5) Rod Ensembles .(6) Three Dimensional Structures .(7) Structural Simplification with Magnetic Mirrors .(8) Periodic Permanent Magnet Stacks - PPM s [subsections are: Travelling Wave Tubes, Wigglers and Undulators, Twister Structures] .(9) Conclusions, References, and Bibliography.



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