

Magnetic Characterization Procedure for Permeable Materials

Track Code: 64582

Categories:

- Electrical Engineering

Keywords:

- Electrical Engineering
- Instrumentation

Material manufacturers generally supply non-saturation magnetic characteristics for different magnetic devices, but some applications require these characteristics during high saturation conditions. Two common procedures for finding these characteristics are Vibrating Sample Magnetometry (VSM), which requires complex and expensive laboratory equipment, and IEEE Standard 393-1991, which is simple and relatively inexpensive, but not as accurate as VSM.

Purdue University researchers have developed a new test apparatus and computational procedure for characterizing highly permeable magnetic materials under both unsaturated and saturated conditions. The method is experimentally simple, inexpensive, and more accurate than IEEE Standard 393-1991.

Advantages:

- Simple and inexpensive
- More accurate than IEEE Standard 393-1991

Potential Applications:

- Materials
- Manufacturing
- Instrumentation

People:

- Sudhoff, Scott D D. (Project leader)
- Cale, James

Intellectual Property:

Application Date: May 25, 2007

Type: Utility Patent

Country of Filing: United States

Patent Number: 8,633,686
Issue Date: January 21, 2014

Application Date: May 25, 2006
Type: Provisional-Patent
Country of Filing: United States
Patent Number: (None)
Issue Date: (None)

Contact OTC:

Purdue Office of Technology Commercialization
The Convergence Center
101 Foundry Drive, Suite 2500
West Lafayette, IN 47906

Phone: (765) 588-3475
Fax: (765) 463-3486
Email: otcip@prf.org