DIRECT-CURRENT MAGNETIC MEASUREMENTS FOR SOFT MAGNETIC MATERIALS

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NOTE

The Society is not responsible, as a body, for the statements and opinions advanced in this publication.
This publication is the second chapter of what will eventually become a comprehensive manual on magnetic testing prepared by a task group of ASTM Committee A-6 on Magnetic Properties. The first chapter was previously published as Magnetic Testing—Theory and Nomenclature, ASTM Special Technical Publication 371.

This chapter aims to provide in a simple and understandable manner the theory and practice basic to the art of direct-current testing of magnetically soft, ferromagnetic materials. It affords the apprentice technician a simple guide to sound testing practice while also offering the student magnetician a more extensive understanding of specific devices and techniques for a broad approach to magnetic testing problems. Emphasis is placed on the ASTM standard test procedures which find general application in the testing of soft magnetic materials such as magnetic irons, silicon-iron alloys, and nickel-iron magnetic alloys. An extensive bibliography identifies reference material for the reader seeking to investigate the subject in greater depth.

The members of the task group of ASTM Committee A-6 who prepared this chapter were D. C. Dieterly, chairman; R. F. Edgar, principal author of this section; A. H. Fredrick; J. W. Hale; D. H. Jones; H. W. Lamson; W. T. Mitchell; R. E. Mundy; and C. D. Owens. Other members of Committee A-6 who contributed importantly in the effort were A. C. Beiler, I. L. Cooter, and W. S. Eberly.
This publication is the first chapter of a comprehensive manual on magnetic testing. The chapter aims to provide in a simple, understandable manner the theory and nomenclature basic to work in the magnetic materials art. It also gives a concise presentation of the basic elements of the magnetic testing art and of the standard nomenclature approved by ASTM Committee A-6. The members of the task group of ASTM Committee A-6 who prepared this chapter of the proposed manual were W. J. Babyak; R. A. Chegwidden; P. P. Cioffi; D. C. Dieterly, chairman; R. F. Edgar; D. I. Gordon; C. C. Horstman; D. H. Jones; and H. W. Lamson, principal author of the section on theory and nomenclature.

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