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# MAGNETIC TESTING— THEORY AND NOMENCLATURE



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Prepared by  
COMMITTEE A-6 on MAGNETIC TESTING  
of the  
AMERICAN SOCIETY FOR TESTING AND MATERIALS



Reg. U. S. Pat. Off.

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## FOREWORD

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This publication is the first chapter of what will eventually become a comprehensive manual on magnetic testing. The manual is being prepared by a task group of ASTM Committee A-6 on Magnetic Properties. This chapter aims to provide in a simple, understandable manner the theory and nomenclature basic to work in the magnetic materials art. Forthcoming chapters now in preparation will deal with specific branches of the magnetic testing art such as: preparation and handling of magnetic test specimens, direct-current magnetic testing, alternating-current magnetic testing, determination of properties of permanent-magnet materials and of commercial forms of magnetic cores and laminations, as well as with high-frequency testing, and the measurement of properties of materials in more complex modes of magnetization.

This first chapter is being published separately because there appears to be an immediate need for a concise presentation of the basic elements of the magnetic testing art and of the standard nomenclature approved by ASTM Committee A-6.

It is emphasized that the purpose of this manual is to provide general instruction in sound magnetic testing practice. It should be helpful to the user in the implementation of ASTM standard test procedures for magnetic testing. It should not be used as a substitute for the ASTM standard test procedures. Where standardized test procedures are not in existence, it will guide the user in setting up testing practices that are basically sound. It will not be a handbook of properties of magnetic materials.

The members of the task group of ASTM Committee A-6 who prepared this section of the proposed manual are: 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 section on theory and nomenclature. Other members of Committee A-6 who con-

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NOTE—The Society is not responsible, as a body, for the statements  
and opinions advanced in this publication.

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## CONTENTS

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	PAGE
Introduction.....	1
Basic Concepts.....	1
Uniform Magnetic Paths.....	5
Electromagnetism.....	6
Normal Induction Curve.....	8
Normal Hysteresis Loop.....	9
Intrinsic Hysteresis Loop.....	12
Incremental Hysteresis Loop.....	14
Internal Fields and the Domain Theory.....	15
Demagnetization Curve and Relaxation Phenomena.....	16
Dynamic Excitation of an Air-Core Inductor.....	17
Dynamic SCM Excitation of an Iron-Core Inductor.....	18
SCM Magnetic Parameters in Terms of Exciting Voltage and Magnetizing Current.....	23
SCM Magnetic Parameters in Terms of Exciting Current.....	27
SCM Magnetic Parameters from Impedance Bridge Measurements.....	29
Analysis of Core-Loss Power.....	31
Incremental Dynamic Excitation—CM Condition.....	32
Miscellaneous Magnetic Terminology.....	34
Units of Magnetic Measurement and Dimensional Values.....	35
Appendix.....	38

## RELATED ASTM PUBLICATIONS

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Magnetic Particle Testing, STP 62 (1945)

Magnetic Testing, STP 85 (1948)

