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POWER TRANSFORMERS
Part 5—ABILITY TO WITHSTAND SHORT-CIRCUIT

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The following interests were represented on the committee responsible for the preparation of this standard:

Australian-British Trade Association

Australian Electrical and Electronic Manufacturers Association

Confederation of Australian Industry

Defence Standardization Committee

Electrical testing laboratories

Electricity Supply Association of Australia

Electricity Supply Engineers Association of N.S.W.

Institution of Engineers, Australia

Railways of Australia Committee

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Part 5—ABILITY TO WITHSTAND SHORT-CIRCUIT

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PREFACE

This standard was prepared by the Association's Committee on Static Electrical Machinery. It is based closely on IEC 76—5 (including Amendment No 1), Power Transformers, Part 5: Ability to Withstand Short Circuits, and is Part 5 of a six-part standard to supersede AS C61—1970, Power Transformers.

The other Parts of the standard are:

Part 1— General Requirements
Part 2— Temperature Rise
Part 3— Insulation Levels and Dielectric Tests
Part 4— Tappings and Connections
Part 6— Sound Levels

Where this standard differs from IEC 76—5 and changes have been made in compliance with Australian requirements, these changes are indicated by a rule in the margin. Only minor deviations from IEC 76—5 have been made but additional information and requirements have been introduced.

The main additions include:

(a) Table 4 (b) which sets out maximum current densities for different classes of transformers.

(b) Appendix A which gives guidance for a reduced schedule of short-circuit tests for category one transformers, that may be applied by agreement between the purchaser and the manufacturer.

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PART 5—ABILITY TO WITHSTAND SHORT-CIRCUIT

SECTION 1. SCOPE AND DEFINITIONS

1.1 SCOPE. This standard specifies the design of power transformers as defined in AS 2374, Part 1, and the requirements necessary both in regard to their ability to withstand short-circuit and the means of demonstrating that ability.

NOTES:

1. Pending the publication of a standard that applies to dry-type transformers*, the requirements of this standard may be applied to dry-type transformers subject to agreement between the purchaser and the manufacturer and taking into account the principles established in Sections 2 and 3.
2. A reduced schedule of short-circuit tests may be applied to Category I transformers by agreement between purchaser, manufacturer and testing authority. Guidance on the reduced schedule is given in Appendix A.

1.2 DEFINITIONS. For the purpose of this standard the definitions given in AS 2374, Part 1 apply.

* In course of preparation.