

An American National Standard

**IEEE Guide for the Application of
Neutral Grounding in Electrical Utility Systems
Part I—Introduction**

Sponsor

**Surge Protective Devices Committee of the
IEEE Power Engineering Society**

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Foreword

(This Foreword is not a part of ANSI/IEEE C62.92-1987, IEEE Guide for the Application of Neutral Grounding in Electrical Utility Systems, Part I - Introduction.)

This guide is the introduction to a series of on neutral grounding in electrical utility systems. When the series of documents are approved and published they will replace IEEE Std 143-1954, IEEE Guide for Ground-Fault Neutralizers, Grounding of Synchronous Generator Systems, and Neutral Grounding of Transmission Systems. In the new series of documents individual considerations and practices will be given to the grounding of synchronous generator systems, generator-station auxiliary systems, distribution systems, and transmission and subtransmission systems.

IEEE Std 143-1954 is a revision of AIEE No 954, Oct 1954, which was a compilation of the following three AIEE Transaction papers.

AIEE COMMITTEE GUIDE REPORT. Application of Ground-Fault Neutralizers. *AIEE Transactions (Power Apparatus and Systems)* vol 72, pt III, April 1953, pp 183-190.

AIEE COMMITTEE REPORT. Application Guide for the Grounding of Synchronous Generator Systems. *AIEE Transactions (Power Apparatus and Systems)* pt III, June 1953, pp 517-530.

AIEE COMMITTEE REPORT. Application Guide on Methods of Neutral Grounding of Transmission Systems. *AIEE Transactions (Power Apparatus and Systems)* pt III, Aug 1953, pp 663-668.

The contents of Parts I, II, III, IV, and V of the revision of IEEE Std 143-1954 are based on the foregoing documents but are amplified and updated with new material from the IEEE TUTORIAL COURSE, Surge Protection in Power Systems (79EH0144-6-PWR).

In Parts I through V of this revision emphasis is on power-system grounding practices as contrasted with the grounding, for example, of industrial systems, which are covered in other guides and standards. The guides and standards should be referenced, when appropriate, to gain a full picture of other grounding practices.

It is impossible to give recognition to all those who have contributed to the technology and practices of grounding of power systems since work involving the preparation of the supplements has been in progress for over thirty years. However, the assistance of members, past and present, of the Neutral Grounding Devices Subcommittee of the Surge Protective Devices Committee, and other similar groups with comparable purposes should be acknowledged.

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