

An American National Standard

**IEEE Guide for Reporting Failure Data for
Power Transformers and Shunt Reactors
on Electric Utility Power Systems**

Sponsor

**IEEE Transformers Committee
of the
IEEE Power Engineering Society**

Secretariat

**Institute of Electrical and Electronics Engineers
of the
National Electrical Manufacturers Association**

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Foreword

(This Foreword is not a part of ANSI/IEEE C57.117-1986, IEEE Guide for Reporting Failure Data for Power Transformers and Shunt Reactors on Electric Utility Power Systems.)

The IEEE Transformer Reliability Working Group was formed in 1974 under the Performance Characteristics Subcommittee of the IEEE Transformers Committee. The purpose of this working group was to investigate the feasibility of pursuing transformer reliability on electric utility power systems. To best address the subject of transformer reliability, the IEEE Working Group concentrated on this guide.

Early in the development of this guide, it was recognized that the Edison Electric Institute (EEI), and in particular, the Electrical System and Equipment Committee (ES&E Committee), had an existing data collection system for summarizing equipment outages, and in particular, one category devoted to power transformers. An effort was made to develop this guide in such a manner that common goals between IEEE and EEI could be established. It was the intent that by working together, both groups could develop a single, flexible dynamic system that would benefit the whole transformer industry, both user and manufacturer alike.

The EEI data base summarizes installations and failures for power transformers 2.5 MVA and above. Although the principles proposed in this guide can be used for any homogeneous population, it is anticipated that initial efforts using the principles of this guide will be directed toward large MVA transformers installed on electric utility power systems.

The thrust of this guide is to define reliability terms and to establish guidelines for a data base and reporting mechanism for power transformer failures. In developing this guide it was discovered that the subject of failure analysis could support a document of its own. Accordingly, a separate working group has been formed and assigned a project to perform this task.

The Accredited Standards Committee C57 had the following membership when it reviewed and approved this document:

Roger Ensign, Chair
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The membership of the working group at the time this guide was published included:

H. F. Light, Chair

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H. R. Braunstein	J.W. Grimes	R. A. Olsson
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D. H. Douglas	R.P. Johnston	T.L. Walters
J. C. Dutton	J.G. Lackey	R.J. Whearty
C. G. Evans	C. Lindsay	
C.M. Gardam	R.I. Lowe	

In order to pursue its goals, the Working Group Chairman established a task force to produce various sections of this guide. The membership of the task force included:

D. J. Cash	J.W. Grimes	H.F. Light
J. E. Dind*	R.P. Johnston	R.J. Whearty
C. M. Gardam	J.G. Lackey	

*It is with deep regret that during the writing of this guide, we lost one of our members, J. E. Dind. He had continuously pursued the subject of transformer reliability and will long be remembered by those of us on this working group and task force.

The following persons were on the balloting committee that approved this document for submission to the IEEE Standards Board:

D. J. Allan	F. J. Brutt	R. L. Ensign
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