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IEEE C57.19.01-1991

(Revision and redesignation of IEEE Std 24-1984)

IEEE Standard Performance Characteristics and Dimensions for Outdoor Apparatus Bushings

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

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Abstract: Electrical, dimensional, and related requirements for outdoor power-class apparatus bushings that have basic impulse insulation levels of 110 kV and higher are covered. Specific values for dimensional and related requirements that are to be interpreted, measured, or tested in accordance with IEEE C57.19.00-1991 are provided. Bushings covered by this standard are intended for use as components of oil-filled transformers, oil-filled reactors, and oil circuit breakers.

Keywords: apparatus bushings, bushings, oil circuit breakers, oil-filled reactors, oil-filled transformers

The Institute of Electrical and Electronics Engineers, Inc.
345 East 47th Street, New York, NY 10017-2394, USA

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Foreword

(This Foreword is not a part of IEEE C57.19.01-1991, IEEE Standard Performance Characteristics and Dimensions for Outdoor Apparatus Bushings.)

The tables and other information contained in this document were originally in ASA C76.11943 through ANSI C76.1-1964. Then, in August 1968, the ANSI C76 Committee decided to separate the standard into three parts: the first (C76.1) to cover the general requirements and test procedures, the second (C76.2) to cover explicit ratings and dimensions, and the third to be an application guide. The latter is still under consideration. ANSI C76.2-1977/ IEEE Std 24-1977 incorporated changes that included

- 1) Test procedure updating
- 2) Adding 362 kV through 800 kV maximum system voltage bushing electrical ratings with wet switching impulse test values and coordination with switching surge sparkover values of arresters
- 3) Establishing dual current ratings for 115 kV through 196 kV insulation class bushings, since circuit breakers have a lower temperature rise, permitting a larger current rating for a given ambient temperature compared with transformers

The Bushing Subcommittee of the Transformers Committee, in keeping with progress in the state of the art, initiated changes that resulted in IEEE Std 24-1984. Changes were made to Table 1, Electrical Insulation Characteristics for Outdoor Power Apparatus Bushings, and to Table 9, Partial Discharge (Radio Influence Voltage) Limits, to make them compatible with the concepts of IEEE Std 262B-1977.

Changes in the current revision include a new standard number, IEEE C57.19.01, which is indicative of its sponsor committee. Changes were also made to Table 9, Partial Discharge Limits, and to Table 10, Power Factor and Capacitance Limits, in order to be compatible with the new test procedures established by its companion standard, IEEE C57.19.00-1991.

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