

An American National Standard

IEEE Standard for Qualification of Class 1E Lead Storage Batteries for Nuclear Power Generating Stations

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

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Foreword

(This Foreword is not a part of ANSI/IEEE Std 535-1986, IEEE Standard for Qualification of Class 1E Lead Storage Batteries for Nuclear Power Generating Stations.)

ANSI/IEEE Std 323-1983, Standard for Qualifying Class 1E Equipment for Nuclear Power Generating Stations, was developed to provide guidance for demonstrating and documenting the adequacy of electrical equipment used in all Class 1E and interface systems. This standard, ANSI/IEEE Std 535-1986, was developed to provide specific methods and type test procedures for lead storage batteries in adherence to ANSI/IEEE Std 323-1983.

Adherence to this standard may not suffice for assuring public health and safety because it is the integrated performance of the electrical systems of the station that limits the consequence of accidents. Each applicant has the responsibility to assure himself and others that this document, if used, is pertinent to his application and that the integrated performance of his station is adequate.

This standard was prepared by the Working Group on Batteries of the Station Design Subcommittee of the Power Generation Committee. At the time this document was approved, the working group had the following members:

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1. Scope

This document describes qualification methods for Class 1E lead storage batteries and racks to be used in nuclear power generating stations outside of primary containment. Qualification required in ANSI/IEEE Std 308-1980 [2] can be demonstrated by using the procedures provided in this standard in accordance with ANSI/IEEE Std 323-1983 [3].

Battery sizing, maintenance, capacity testing, installation, charging equipment, and consideration of other type batteries are beyond the scope of this standard.

2. Definitions

cell type: Cells of identical design, for example, plate size, alloy, construction details, but that may have differences in the number of plates and spacers, quantity of electrolyte, or length of container.

For other definitions of terms contained in this standard, refer to Section 3. For all definitions not listed in the referenced documents ([2] through [9]), refer to ANSI/IEEE Std 100-1984, IEEE Standard Dictionary of Electrical and Electronics Terms [1].¹

3. References

This standard shall be used in conjunction with the following publications:

[1] ANSI/IEEE Std 100-1984, IEEE Standard Dictionary of Electrical and Electronics Terms.²

[2] ANSI/IEEE Std 308-1980, IEEE Standard Criteria for Class 1E Power Systems for Nuclear Power Generating Stations.

[3] ANSI/IEEE Std 323-1983, IEEE Standard for Qualifying Class 1E Equipment for Nuclear Power Generating Stations.

¹The numbers in brackets correspond to those of the references listed in Section 3 of this standard.

²ANSI/IEEE publications are available from the Sales Department, American National Standards Institute, 1430 Broadway, New York, NY 10018.