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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 47027-2026

**Static loading test method for bearing capacity of pole and
tower foundation**

杆塔基础承载能力静载荷试验方法

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document is modified to adopt IEC 61773:1996 "Tests on foundations of overhead line structures".

This document has undergone significant structural adjustments compared to IEC 61773:1996. A table comparing the structural numbering changes between the two documents is provided.

See Appendix A.

This document differs significantly from IEC 61773:1996 in several technical aspects. The relevant clauses are indicated in vertical margins.

Single lines (l) are indicated. A summary of these technical differences and their causes can be found in Appendix B.

The following editorial changes have been made to this document.

---To align with existing standards, this document has been renamed "Static Load Test Method for Bearing Capacity of Tower Foundations";

---Informative Annexes A to D and Annex F of IEC 61773:1996 have been deleted;

---Informative Appendices A, B, and D have been added;

---The errata included in IEC 61773:1996/COR1.1997 will have the relevant clauses marked with vertical double margins.

The line (l) is marked.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China Electricity Council.

This document is under the jurisdiction of the National Technical Committee on Standardization of Overhead Lines (SAC/TC202).

1 Scope

This document describes the test method for static load testing of tower foundation bearing capacity.

This document applies to the testing of the bearing capacity of the foundations of overhead transmission line towers at all voltage levels.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

GB 50007 Code for Design of Building Foundations GB 50233 Construction and Acceptance Specification for 110kV~750kV Overhead Transmission Lines GB/T 50279 Basic Terminology Standard for Geotechnical Engineering DL/T 5219 Code for Design of Foundations for Overhead Transmission Lines

3 Terms and Definitions

The terms and definitions defined in GB/T 50279 and DL/T 5219, as well as the following terms and definitions, apply to this document.

Shallow Foundation

A type of tower foundation where the foundation is shallowly embedded or where the side friction can be ignored when calculating the vertical bearing capacity.

Note: This generally refers to undisturbed soil foundations with a burial depth not exceeding 5.0m and not exceeding 3.0 times the diameter (or side length) of the foundation base. Such tower foundations typically include excavated foundations.

Foundations include types such as bases and rock-embedded foundations; or extended foundations or prefabricated foundations with a burial depth not exceeding 1 to 2 times the side length (or diameter) of the base plate.

deepfoundation

Tower foundations that are deeply embedded or whose side friction cannot be ignored when calculating the vertical bearing capacity.

Note: Such tower foundations typically include bored piles, cast-in-place piles, micropiles, and other foundation types.

The foundation pit is directly drilled (excavated) in natural soil (rock), and a steel reinforcement frame and concrete (or mortar) are poured into the foundation pit to form the tower foundation.

Extended Foundation

The excavation and backfill foundation consists of a base plate and main columns, and bears the load of the upper tower structure.

Note: These are typically concrete stepped foundations, reinforced concrete slab-column foundations, or gravity foundations.

assembled foundation A tower foundation is a combination of two or more prefabricated

components assembled and connected together.