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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 33096-2025

Replacing GB/T 33096-2016

General specification of elastic rubber parts for wind turbines

风力发电机组用橡胶弹性元件通用技术条件

Issued on: October 5, 2025 **Implemented on: May 1, 2026**

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Standardization Administration of the PRC

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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 supersedes GB/T 33096-2016 "General Technical Conditions for Rubber Elastic Elements for Wind Turbine Generators" and is consistent with GB/T 33096- Compared to.2016, aside from structural adjustments and editorial changes, the main technical changes are as follows:

a) Two symbols, "Fr" and "HA", were added; three symbols, including "FG", were deleted; and the descriptions of "FR" and "DeltaK" were modified (see section 4). Chapter (

3.1 of the.2016 edition);

b) The naming of various rubber elastic elements has been changed, and a classification description of gearbox rubber elastic supports has been added (see 5.1,.2016 edition). 3.2);

c) Change the "yaw bearing coordinate system" to the "hub center fixed coordinate system" (see 5.2,

3.3 in the.2016 version);

d) The requirements for tensile strength, elongation at break, and tear strength of rubber materials have been changed, and the conditions for ozone aging resistance testing have been modified, with the addition of... Liquid resistance requirements are specified (see Table 1, 6.3, section

4.2 of the.2016 edition);

e) The requirements for corrosion protection of metallic materials have been changed (see

6.4.2,

4.3.2 in the.2016 edition);

f) An additional requirement for the static stiffness change rate at -30°C has been added (see 6.5.2);

g) Increased requirements for the ultimate sealing performance of rubber elastic supports in hydraulic gearboxes (see 6.5.4);

h) The fatigue performance requirements for the gearbox rubber elastic support have been changed (see 6.5.5,

1 Scope

GB/T 33096-2025 is the Chinese national standard covering the rubber mounts and bushings in a turbine - the stiffness in each direction and its change with temperature, the fatigue over the hundreds of millions of cycles twenty years imposes, the ozone and ultraviolet resistance, and the bond to the metal. Issued on 5 October 2025, it has been in force since 1 May 2026, replacing GB/T 33096-2016.

This document specifies the symbols, classifications, and coordinate system selection for rubber elastic elements (hereinafter referred to as "rubber elastic elements") used in wind turbine generator sets. Requirements, technical specifications, test methods, inspection rules, marking, packaging, storage and transportation, etc. This document applies to the gearboxes, generators, nacelle covers, control cabinets, etc., of horizontal axis wind turbine generator sets of.200kW and above. Design, production and inspection of rubber elastic elements for cushioning and vibration damping.

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/T 228.1 Metallic materials - Tensile testing - Part

3 Terms and Definitions

This document does not contain any terms or definitions that need to be defined.

6 Laboratory Testing Test methods

GB/T 39693.4 Determination of hardness of vulcanized or thermoplastic rubber - Part

4.Determination by Shore hardness tester (Shore hardness) Constant indentation hardness