

ICS 27.180
CCS F 11



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

GB/T 46785-2025

**Wind energy generation systems - Desert and gobi wind
turbines**

风能发电系统 沙戈荒型风力发电机组

Issued on: December 2, 2025

Implemented on: December 2, 2025

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

Table of Contents

1.Scope	1
2 Normative References	1
3.Terms and Definitions	1
4 Symbols	2
5.Unit Environmental Conditions	2
5.1 Environmental Parameter Conditions	2
5.2 Unit Class	3
5.3 Wind Erosion Environment in the Sandy Gobi Desert	3
6.Technical Requirements	4
6.1 Basic Requirements	4
6.2 General Technical Requirements	4
6.3 Mechanical Components	4
6.4 Environmental Control System	5
6.5 Electrical System	5
7.Test Methods	5
8 Inspection Rules	6
8.1 Inspection Category	6
8.2 Inspection Regulations	6
8.3 Inspection Items	6
9.1 Transportation	7
9.2 Installation, Debugging, and Storage	7
9.3 Operation and Maintenance	8

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. 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 Machinery Industry Federation. This document is under the jurisdiction of the National Technical Committee on Standardization of Wind Power (SAC/TC50). This document was drafted by: Goldwind Science & Technology Co., Ltd., Inner Mongolia

University of Technology, and the Hohhot branch of the Chinese Academy of Agricultural Mechanization Sciences. Branch Company Limited, China Electric Power Research Institute Co., Ltd., Beijing Certification Center Co., Ltd., Hunan University, Envision Energy Co., Ltd. Company, Shanghai Electric Wind Power Group Co., Ltd., Beijing Goldwind Science & Technology Wind Power Equipment Co., Ltd., Mingyang Smart Energy Group Co., Ltd. Guohua Energy Investment Co., Ltd., Wind Power Division of CRRC Zhuzhou Electric Locomotive Research Institute Co., Ltd., and Zhuzhou Times New Material Technology Co., Ltd. The company, Hunan Xinglan Wind Power Co., Ltd., Yunda Energy Technology Group Co., Ltd., CRRC Shandong Wind Power Co., Ltd., and CRRC Qihang New Energy Source Technology Co., Ltd., Shanghai Electric Power Industry Co., Ltd., CGN (Ulanqab) Wind Power Co., Ltd., and Sinovel Wind Power Technology (Group) Joint-stock company, Beijing Goldwind Smart Energy Technology Co., Ltd., CSSC Offshore & Marine Wind Power Co., Ltd., Jiangsu Goldwind Technology Co., Ltd., Shanghai Surveying and Mapping Co., Ltd. Design Institute Co., Ltd., International Copper Professionals Association (USA) Beijing Representative Office, China Water Resources and Hydropower Engineering Consulting Group Co., Ltd., China Quality Certification Center Limited Liability Company, Sungrow Power Supply Co., Ltd., Shenzhen Hopewind Electric Co., Ltd., Inner Mongolia Meteorological Service Center, Zhejiang Zheng Tai New Energy Development Co., Ltd., China Resources Power Technology Research Institute Co., Ltd., Jiangxi Zhixin Testing and Certification Technology Co., Ltd., Shanghai Zhongrenshang Kexin New Energy Technology Co., Ltd., and Shanghai Zhenye Environmental Technology Co., Ltd. The main drafters of this document are. Cao Zhigang, Chen Xin, Meng Keqilao, Ren Jun, Qin Shiyao, Yu Liping, Cai Zhisong, Huang Sheng, Zou Yunwu, and Wan Baoku. Wang Dongya, Xu Honglei, Zou Libing, Guan Xiaoqing, Ouyang Hua, Chen Shaomin, Feng Xuebin, Liao Jianmin, Liu Qindong, Shen Ruiqing, Zhang Zhiwei, Lü Cheng, Sun Xing Zhang Jingyi, Zhang Shifu, Gan Xuchao, Wuyun Gaowa, Wei Juan, Chen Xiaoxu, Wu Junhui, Yang Changzi, Zhang Wanjun, Liu Fang, Zhang Jingjing, Jiang Juan, Li Dongsheng Wang Dagang, Wang Wenping, Huang Jietao, Yuan Ying, Qiu Qingfang, Chen Yan, Wu Yuyang, Zhou Dangsheng, Xu Lina, Zhu Rongyao, Yuan Wei, Zhang Long, Fan Shaohui, Yao Jiagui Ma Jihui and Du Cong. Wind power generation system, Shago wasteland type wind turbine generator set

1 Scope

GB/T 46785-2025 is the Chinese national standard covering the turbine built for the desert - the sand that erodes a blade leading edge and works into every seal and filter, the temperature range from below freezing to fifty degrees, the low humidity and static, and the water that is not available for cleaning. China is building its largest wind and solar bases in exactly this terrain. First edition. It was issued on 2 December 2025 and has been in force since 2 December 2025, as a first edition. The document is under the responsibility of the China Machinery Industry Federation. This page is published from the official record of the

2025 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document specifies the environmental conditions, technical requirements, and testing procedures for wind turbine generator sets (hereinafter referred to as "generator sets") in desert, Gobi, and arid regions. Inspection methods, inspection rules, and requirements for the unit in terms of transportation, installation, operation and maintenance. This document applies to the design of grid-connected horizontal axis wind turbine generators used in desert, Gobi and arid regions.

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 1865 Paints and varnishes - Artificial weathering and artificial radiation exposure - Filtered xenon arc radiation

GB/T 2423.37 Environmental testing of electrical and electronic products - Part

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 desert A barren region where the ground is completely covered by sand, vegetation is sparse, rainfall is scarce, and the air is dry.

Note. Deserts are also known as "sand curtains".

3.2 Gobi Large desert and semi-desert regions.

Note. Most areas of the Gobi Desert are not deserts but bare rock, hence the name "Gobi Desert".