

ICS 27.100
CCS F 23



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

GB/T 25737-2025

Replacing GB/T 25737-2010

**Acceptance specification for 1000kV substation monitoring
system**

1000kV变电站监控系统验收规范

Issued on: August 1, 2025

Implemented on: November 1, 2025

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

Table of Contents

Preface	III
1 Scope	1
2 Normative references	1
3 Terms and Definitions	1
4 Acceptance Conditions	1
4.1 Basic conditions	1
4.2 Factory Acceptance Conditions	2
4.3 On-site acceptance conditions	2
5 Acceptance Process	2
6 Acceptance Content	2
6.1 Basic Content	2
6.2 Factory Acceptance	3
6.3 On-site acceptance	3
7 Acceptance and rectification	3
7.1 Factory Acceptance and Rectification	3
7.2 On-site acceptance and rectification	3
8 Acceptance Results	3
8.1 Acceptance	3
8.2 Acceptance Report	4
8.3 Acceptance Materials Filing	4
Appendix A (Informative) Responsibilities of relevant acceptance units	5
A.1 Responsibilities of the project construction unit	5
A.2 Responsibilities of the acceptance working group	5
A.3 Responsibilities of the dispatching organization	5
A.4 Responsibilities of Equipment Operation and Maintenance Unit	5
A.5 Responsibilities of Technical Support Units	5
A.6 Responsibilities of the installation and commissioning unit	6
A.7 Responsibilities of the Design Unit	6
A.8 Responsibilities of System Integrators and Equipment Suppliers	6
Appendix B (Normative) Acceptance Outline	7
B.1 Preparation Basis	7
B.2 Acceptance Outline Contents	7

Appendix C (Normative) Factory Acceptance Test Contents	8
C.1 System Function Test	8
C.2 System Performance Test	10
C.3 System Stability Test	11
C.4 System Optional Function Test	11
Appendix D (Normative) Site Acceptance Test Contents	12
D.1 Secondary circuit acceptance test	12
D.2 Monitoring system test	12
D.3 Joint commissioning and testing of main plant and station	12
D.4 Other tests	13

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document replaces GB/T 25737-2010 "1000kV substation monitoring system acceptance specification" and is consistent with GB/T 25737-2010.

In addition to structural adjustments and editorial changes, the main technical changes are as follows.

- Added acceptance conditions such as product inspection, safety and reliability, and acceptance environment (see Chapter 4);
 - Added content related to the acceptance process and clarified the acceptance organization process (see Chapter 5);
 - Added a chapter on basic acceptance content, refined the common parts of factory acceptance and on-site acceptance, and added new protocol documents, configuration files, etc.
- Review requirements and system and equipment information consistency verification requirements (see 6.1);
- Added content related to acceptance and rectification, and clarified the requirements for rectification of problems during the acceptance period (see Chapter 7);
 - Added content related to acceptance results, clarified acceptance conditions, acceptance reports and acceptance material filing requirements (see Chapter 8);
 - Changed the responsibilities of each unit in the acceptance working group (see Appendix A, Chapter 4 of the 2010 edition);

- Added acceptance test items for functions such as sequential control and intelligent alarm (see Appendix C);
- Added the main plant station joint commissioning test content (see Appendix D).

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document was proposed by the China Electricity Council.

This document is under the jurisdiction of the National Technical Committee for Ultra-High Voltage AC Transmission Standardization (SAC/TC569).

This document was drafted by: China Electric Power Research Institute Co., Ltd., State Grid Corporation of China, China Southern Power Grid Co., Ltd., State Grid Tianjin Electric Power Company, State Grid Shanghai Electric Power Company, China Southern Power Grid Co., Ltd. Ultra-high Voltage Transmission Company, State Grid Hunan Province Power Co., Ltd., Guangxi Power Grid Co., Ltd. Electric Power Research Institute, State Grid Liaoning Electric Power Co., Ltd., State Grid Chongqing Electric Power Co., Ltd.

Electric Power Research Institute of State Grid Corporation of China, Electric Power Research Institute of Guizhou Power Grid Co., Ltd., Electric Power Research Institute of State Grid Hebei Electric Power Company, North China Electric Power University, State Grid Shandong Electric Power Company, State Grid Corporation of China Northeast Branch, and State Grid Corporation of China East China Branch.

The main drafters of this document are: Li Ang, Chang Naichao, Li Jin, Xie Xin, Chen Jian, Zhang Jinhu, Chen Hongfu, Zhang Kefeng, Li Yalei, Li Long, Zhou Ke, Wang Shunjiang, Zeng Zhiqiang, Li Jinsong, Xu Changbao, Gao Jun, Lv Fangcheng, Liu Yong, Zhao Na, Peng Fei, Li Wenzhuo, and Zhang Liang.

The previous versions of this document and the documents it replaces are as follows.

- First published in 2010 as GB/T 25737-2010;
- This is the first revision.

1 Scope

This document specifies the acceptance conditions, acceptance process, acceptance content, acceptance rectification and acceptance results of the 1000kV substation monitoring system. Require.

This document is applicable to the acceptance of 1000kV substation monitoring systems. It can be used as a reference for the acceptance of substation monitoring systems at other voltage levels.

2 Normative references

GB/T 24833

3 Terms and Definitions

The terms and definitions defined in GB/T 24833 and the following apply to this document.

3.1 and performance testing

According to the contract and technical agreement requirements, before leaving the factory, the system integrator or equipment manufacturer shall conduct functional inspection according to the factory acceptance outline.

3.2 Site acceptance test site acceptance test; SAT

According to the contract and technical agreement, after the system or equipment arrives at the site and completes installation and commissioning, before it is put into operation, the site acceptance inspection Functional and performance testing is carried out.

4.1 Basic conditions

The acceptance of the 1000kV substation monitoring system includes factory acceptance and on-site acceptance, and should meet the following conditions.

- a) The unit responsible for the construction of the project shall organize and establish an acceptance working group. The responsibilities of the relevant units are shown in Appendix A;
- b) The acceptance outline is completed and prepared in accordance with the requirements of Appendix B;
- c) The project contract documents, design liaison meeting documents and other project-related agreements are complete;
- d) The design drawings and configuration files required for the project have been completed and approved;
- e) The substation monitoring system and related access equipment have obtained valid and qualified certificates issued by a testing agency with national or industry testing qualifications. Third-party test report;
- f) The substation monitoring system and access equipment meet the safety and reliability requirements in the bidding documents;
- g) The acceptance tools such as instruments and meters are fully equipped and have obtained the verification/calibration certificate issued by the national legal metrology