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Substation secondary system - Part 1: General requirement

变电站二次系统 第1部分：通用要求

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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 is Part 1 of GB/T 45906 "Substation Secondary Systems". GB/T 45906 has been published in the following parts.

- Part 1: General requirements;
- Part 2: Data and models;
- Part 3: Communication message specifications;
- Part 4: Network security protection;
- Part 5: Protection, control and related equipment;
- Part 6: Station monitoring system;
- Part 7: Centralized monitoring system;

- Part 8: Electrical operation error prevention;
- Part 9: Construction specifications;
- Part 10: Testing and inspection.

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.

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Introduction

In order to meet the transformation and development needs of the substation secondary system, the top-level design of the overall architecture, functions, data and equipment of the substation secondary system is realized.

Design, promote the optimization and upgrading of new power system equipment

manufacturing industry, improve the overall performance and reliability level of substation secondary system, formulate this system List standards.

GB/T 45906 "Substation Secondary System" comprehensively covers general requirements, equipment system functional requirements, project implementation and testing, etc.

The substation secondary system is planned to consist of 10 parts.

- Part 1: General requirements. The purpose is to standardize the overall requirements and reliability, functional integration, information interaction, Network security and other technical requirements.
- Part 2: Data and Model. The purpose is to standardize the substation secondary system data and model framework, clarify data classification, collection Processing requirements, modeling methods, and model configuration processes.
- Part 3: Communication message specification. The purpose is to standardize the communication protocol set of the substation secondary system, clarify the data objects and communication The implementation method of the service.
- Part 4: Network security protection. The purpose is to standardize the technical requirements for security protection of substation secondary systems.
- Part 5: Protection control and related equipment. The purpose is to standardize substation relay protection and safety automatic devices, automation equipment Technical requirements for power equipment, power metering and power quality equipment, collection and execution equipment, communication equipment and auxiliary monitoring equipment.
- Part 6: Station Monitoring System. The purpose is to standardize the technical requirements of the station monitoring system, including functions, performance, information exchange, etc.
- Part 7: Centralized monitoring system. The purpose is to standardize the system architecture, functions, performance, information exchange, and Mutual technical requirements.
- Part 8: Electrical operation error prevention. The purpose is to standardize the overall requirements, architecture, functions and Energy, performance and application requirements.
- Part 9: Construction Specifications. The purpose is to standardize the overall requirements, design principles, process control and construction of substation secondary system engineering.

System and technical requirements.

- Part 10. Testing and inspection. The purpose is to standardize the general principles and

requirements for the inspection of substation secondary system equipment and systems.
Please wait. Substation secondary system Part 1: General requirements

1 Scope

This document specifies the overall requirements, system architecture, reliability requirements, function integration requirements, information exchange requirements and network requirements of the substation secondary system.

Network security requirements.

This document applies to the design, development, testing, construction, operation, maintenance and overhaul of substation secondary systems.

2 Normative references

GB/T 40435

GB/T 45906.5

GB/T 45906.6

GB/T 45906.7

GB/T 45906.9

GB/T 45906.10

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1

It is composed of equipment and software with functions of collection, measurement, protection, control, communication, monitoring, inspection, metering, etc., which can realize the control of power grid and substation.

The main and auxiliary equipment operation monitoring, operation control, abnormal alarm, fault isolation, stability control, safety protection and operation and maintenance management of the station are also provided for the remote main The station provides a system that provides monitoring, operation, maintenance and other support services.

3.2

Equipment that controls, regulates, protects, monitors and measures power grids and primary equipment, and supports the operation, operation and management of these equipment. Management related equipment.