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

GB/T 26882.3-2024

Replacing GB/T 26882.3-2011

**Grain and oil storage-Monitoring and control system of
stored-grain condition-Part 3: Software**

粮油储藏 粮情测控系统 第3部分：软件

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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 3 of GB/T 26882 "Grain and Oil Storage Grain Condition Monitoring

and Control System". GB/T 26882 has been published as follows part.

- Part 1: General;
- Part 2: Extension;
- Part 3: Software;
- Part 4: Information exchange interface protocol.

This document replaces GB/T 26882.3-2011 "Grain and oil storage grain condition monitoring and control system Part 3: Software" and GB/T 26882.3- Compared with 2011, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- a) The user interface has been changed (see Chapter 7, Chapter 7 of the 2011 edition);
- b) The software function diagram has been changed (see 8.1, 8.1 of the 2011 edition);
- c) The software settings have been changed (see 8.2, 8.2 of the 2011 edition);
- d) Added early warning function requirements (see 8.4.5);
- e) The data structure and detection point sorting method have been changed (see Appendix A, Appendix A of the 2011 edition).

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

- First published in 2011 as GB/T 26882.3-2011;

- This is the first revision.

Introduction

At present, real-time monitoring of grain conditions through grain condition measurement and control systems has become an indispensable technical means in grain storage operations.

The control system can also cooperate with various grain storage processes to control the grain situation and ensure the storage safety of grain.

The formulation of the "Grain Condition Monitoring and Control System" provides a basis for the production and application of grain condition monitoring and control system products, which is of great significance to improving product quality and enhancing storage application Management efficiency and data sharing are of great significance.

In recent years, with the development of information technology and green grain storage technology, new requirements have been put forward for grain condition monitoring and control systems.

In addition to measuring temperature and humidity, we also added moisture, gas, and stored grain pests, as well as ventilation, air conditioning, and circulation, which are related to grain condition detection results.

The grain storage network has gradually covered the entire storage area. In response to these changes and demands, GB/T 26882- 2011 was revised in due course.

According to the general requirements, hardware, software and information exchange content of grain condition monitoring and control systems, GB/T 26882 is planned to consist of four parts.

- Part 1: General. The purpose is to establish the overall requirements and relevant rules that the grain condition monitoring and control system needs to comply with.
- Part 2: Extension. The purpose is to establish the execution of grain condition detection and grain condition control of the extension of the grain condition measurement and control system placed at the grain silo end.

Technical requirements such as network access.

- Part 3: Software. The purpose is to establish the basic content of the application software functions and reports of the grain condition monitoring and control system.
- Part 4: Information exchange interface protocol. The purpose is to establish the information exchange interface protocol between the extension and the host computer of the grain condition monitoring and control system, and between the extension and the host computer of the grain condition monitoring and control system.

The protocol and related rules for information exchange between the system and other grain depot application systems.

Grain and oil storage grain condition monitoring system Part 3: Software

1 Scope

This document specifies the model compilation, basic requirements, interface technical requirements, user interface, system Contents on system functions, software testing and software upgrades.

This document is applicable to the development and application of grain condition measurement and control software in grain and oil storage.

2 Normative references

GB/T 8567

GB/T 15532

GB/T 16680

GB/T 26882.1

GB/T 26882.2

GB/T 26882.4

GB/T 29374

GB 50174-2017

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 A software system that intelligently analyzes and controls related equipment

Using modern electronic technology and computer technology, the factors affecting grain changes in grain and oil storage are detected in real time, data is processed,

3.2

The process of conducting real-time research and judgment on the grain situation based on the collected grain data (including numerical and non-numerical) according to the analysis model.

Note. Includes processing, correction, model learning, etc. of various raw data.