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

GB/T 44692.4-2026

**Equipment integrity of hazardous chemicals enterprises - Part
4: Information technology specification**

危险化学品企业设备完整性 第4部分：信息技术规范

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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 is Part 4 of GB/T 44692 "Integrity of Equipment in Hazardous Chemical Enterprises". GB/T 44692 has the following publications. part.

1. Management System Requirements;

2. Technical Implementation Guidelines;

3. Performance Indicator Setting and Calculation Methods;

4. Information Technology Specifications. 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 and is under the jurisdiction of the National Technical Committee on Standardization of Hazardous Chemicals Management (SAC/TC251). This document was drafted by: Sinopec Safety Engineering Research Institute Co., Ltd., Chemical Registration Center of the Ministry of Emergency Management, and Sinopec-Korea (Wuhan) Petroleum. Chemical Co., Ltd., Shengli Oilfield Branch of China Petroleum & Chemical Corporation, Sinopec (Guangdong) Refining & Chemical Co., Ltd., China Special Equipment Co., Ltd. Testing and Research Institute, Zhejiang Petroleum Branch of China Petroleum & Chemical Corporation, Fushun Petrochemical Branch of China National Petroleum Corporation Company, China University of Petroleum (Beijing), Beijing University of Chemical Technology, Qinghai Huixin Asset Management Co., Ltd., Shaanxi Yanchang Petroleum (Group) Co., Ltd. Ren Company, Hebei Chengxin Group Co., Ltd., Zhejiang Jinhua New Material Co., Ltd., and Henan Xinlianxin Chemical Industry Group Co., Ltd. Company. Zhejiang Wanfeng Chemical Co., Ltd. The main drafters of this document are. Qu Dingrong, Dang Wenyi, Xu Shujian, Wei Dong, Qiu Hongbin, Ren Gang, Sun Xinwen, Li Yuntao, Lü Wei, Xu Xing, and Yang Wenxue. Liu Xin, Qiu Zhigang, Guo Suqi, Chen Zengliang, Wu Wenbin, Duan Binghong, Chang Xibin, Qin Yuanzhong, Zhang Yuefeng, He Jianbin, Zhou Jinqiao, Ai Hui, Liu Xize Xu Ke, Yang Feng, Xing Meng, Zheng

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Equipment is the material foundation for safe production in enterprises. Hazardous chemical enterprises deal with flammable, explosive, toxic, and harmful materials and products, involving the use of... The processes of use, storage, manufacturing, handling, or transportation are characterized by severe equipment corrosion, frequent malfunctions, and difficulty in identifying potential risks, especially with the following With the development of my country's chemical industry, the number of equipment and facilities exceeding their design lifespan is increasing, and the management of aging equipment has attracted widespread attention. Strengthening... Equipment integrity management is a crucial aspect of process safety management, a global trend in equipment management, and a key aspect of improving equipment quality in hazardous chemical enterprises. Advanced control methods for improving equipment management, controlling equipment risks, eliminating equipment hazards, and preventing equipment accidents. GB/T 44692 "Equipment Integrity in Hazardous Chemical Enterprises" aims to guide hazardous chemical enterprises in establishing and implementing equipment integrity management. The goal is to continuously maintain the equipment in a physically and functionally intact, safe, reliable, and controlled state, ensuring it meets its expected functions throughout its lifecycle. This ensures the safety of equipment by preventing safety accidents or environmental pollution incidents such as hazardous chemical leaks, poisoning, fires, and explosions. Long-term operation lays the foundation for implementing process safety management of hazardous chemicals. The implementation of GB/T 44692 is based on management systems as the standard, supported by technological applications, evaluated by performance indicators, and grounded in information systems. These carriers work together to establish, implement, maintain, and continuously improve equipment integrity management in hazardous chemical enterprises. GB/T 44692 is proposed to consist of four carriers. Partial composition.

- 1.Management System Requirements. The purpose is to define the organizational environment, leadership role, planning, support, operation, performance evaluation, and improvement. The basic elements of the equipment integrity management system.
- 2.Technical Implementation Guidelines. The purpose is to provide guidance on equipment classification and evaluation, risk assessment, defect classification, reliability evaluation, and lifespan assessment. Guidance on key supporting technologies for equipment integrity management, such as life prediction, corrosion monitoring and risk assessment, and dynamic equipment monitoring and diagnosis.
- 3.Performance Indicator Setting and Calculation Methods. The purpose is to establish the

principles for setting performance indicators for equipment integrity management, and to develop various methods for calculating these indicators. Technical requirements for industry indicator setting and calculation, indicator decomposition and implementation, indicator statistics and analysis, etc.

4. Information Technology Specifications. The purpose is to define the system architecture, technical architecture, and application specifications for the equipment integrity management information system. Technical specifications for architecture, functional design, smart terminal design, system configuration, etc. Equipment integrity of hazardous chemical enterprises Part

1 Scope

GB/T 44692.4-2026 is the Chinese national standard covering the information system behind an equipment integrity programme in a chemical plant - the equipment register and its hierarchy, the inspection and test records, the condition data from monitoring, the deviations and the interfaces to maintenance and process safety. Part 4 of the series, first edition, in force since 1 June 2026. It was issued on 27 February 2026 and has been in force since 1 June 2026, as a first edition. The document is under the responsibility of the Standardization Administration of China. This page is published from the official record of the 2026 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 establishes the general principles for information technology on equipment integrity in hazardous chemical enterprises, and specifies the system architecture, technical architecture, and application architecture. Functional design, AI technology application, and smart terminals. This document applies to the information management of equipment integrity in hazardous chemical enterprises.

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 22081 Network Security Technology - Information Security Control

GB/T 22239 Information Security Technology - Basic Requirements for Network Security Level Protection

GB/T 23022 Standard for Operation Management of Production Equipment under the Integration of Information Technology and Industrialization Management System