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

GB 12710-2024

Safety specification for the coking plant

焦化安全规范

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Table of Contents

1	Scope
2	Normative references
3	Metallurgy, nonferrous metals
4	General Requirements
5	Factory site, factory area and buildings (structures)
6	Electrical facilities
7	Chemical Plant
8	Coal preparation
9	Coking
10	Gas purification
11	Boiler Safety Technical Regulations
12	Tar processing
14	Oil, acid and alkali loading and unloading and transportation
15	Maintenance
32	Reference

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 12710-2008 "Coking Safety Regulations". Compared with GB 12710-2008, except for structural adjustments and editorial changes, In addition, the main technical changes are as follows:

- Changed the terms and definitions (see Chapter 3, Chapter 3 of the.2008 edition);
- Added fire hazard classification of main production units (equipment) of coking enterprises (see Table 2);
- Added the division of main outdoor explosion hazardous environment areas (see Table 4);
- Added requirements for the layout of the central control room (see 5.3.3, 6.1.4);
- Added partial load classification requirements for coking enterprises (see 6.1.14);

- Added safety requirements for recovery and treatment of volatile organic compounds (VOCs) (see 7.4);
- Added safety requirements for coal humidity control process (see 8.6);
- Added safety requirements for utilization of waste heat from coke oven flue gas, desulfurization and denitrification, and utilization of waste heat from riser pipes (see 9.1.45 and 9.1.46);
- Added safety requirements for coke oven pushing, coal loading and dust removal (see 9.1.47);
- Added safety requirements for anhydrous ammonia process (see 10.2.21~10.2.29);
- Deleted the requirements related to dry quenching (see

1 Scope

China's mandatory safety specification for coking plants. A coke oven battery is one of the most hazardous installations in heavy industry, and for reasons that compound each other: it operates at over a thousand degrees continuously for decades, it produces coke oven gas that is both flammable and rich in carbon monoxide, and it releases the coal tar volatiles that made coke oven emissions one of the first recognised occupational carcinogens. The specification covers the fire and explosion controls on the gas system, where the danger is a mixture reaching the explosive range inside a main or a holder, the carbon monoxide detection and rescue arrangements, the by-product plant with its benzene and ammonia, the quenching operations, and the protection of the workers on the oven top who stand in the emissions. It applies to the design, construction and operation of coking plants.

This document stipulates the overall requirements for safe production of coking enterprises, plant layout, buildings (structures), equipment and facilities, processes and maintenance, etc. Technical requirements. This document is applicable to the design of new construction, reconstruction and expansion projects of coking enterprises, as well as the production, inspection, maintenance and safety management of the enterprises.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB 2894 Safety signs and their use guidelines

GB 4053 (all parts) Safety requirements for fixed steel ladders and platforms

GB 4387 Safety regulations for railway and road transport within industrial enterprises

GB 4962 Safety technical regulations for the use of hydrogen

GB 6222 Gas Safety Regulations for Industrial Enterprises

GB 7231 Basic identification colors, identification symbols and safety signs for industrial pipelines

GB 12158 General Guidelines for Preventing Electrostatic Accidents

GB 39800.1 Specification for personal protective equipment Part

3 Metallurgy, nonferrous metals

GB 50016 Code for Fire Protection Design of Buildings

GB 50057 Code for Lightning Protection Design of Buildings

GB 50058 Design specification for electrical installations in explosive atmospheres

GB 50160 Fire protection design standard for petrochemical enterprises

GB 50177 Hydrogen Station Design Specification

GB 50201 Flood Control Standard

GB 50351 Specification for fire protection dike design in tank areas

GB 50414 Fire protection design standard for iron and steel metallurgical enterprises

GB 50489 Specification for general layout and transportation design of chemical enterprises

GB 50603 Specification for general layout and transportation design of steel enterprises

GB 51066 Safety technical specification for dry gas holders in industrial enterprises

GB 55036 General specification for fire protection facilities

GB 55037 General code for fire protection of buildings AQ7012 Safety Technical Specifications for Gas Drainers AQ7013 Safety regulations for dry coke quenching SH3009 Design specification for flammable gas exhaust system in petrochemical industry TSG