



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

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Code for design of dyeing and printing plant (2025 edition)

印染工厂设计标准 (2025年版)

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Foreword

This document was issued on 25 October 2016 by the Ministry of Housing and Urban-Rural Development of the PRC and takes effect on 1 July 2017.

It is a GB standard without the /T suffix: compliance is mandatory in China.

The document runs to 130 pages. The identification, the dates, the classification and the table of contents on this page are taken from the cover and the printed contents of the standard itself.

This document is the 2025 edition of the standard. The original code, GB 50426-2016 "Code for design of dyeing and printing plant", was issued on 25 October 2016 and took effect on 1 July 2017.

By Announcement No. 172 of 2025, dated 9 December 2025, the Ministry of Housing and Urban-Rural Development approved a partial revision of the code, effective 1 April 2026, and changed the title to "Standard for design of dyeing and printing plant". In the published text the revised provisions are underlined, and the provisions set in bold are mandatory provisions that must be strictly enforced.

The partial revision was carried out by the Zhejiang Provincial Institute of Architectural Design and Research together with Kaiyuan Environmental Technology Group, Zhejiang Zhongcai Pipe Technology and the Sichuan Textile Industry Design Institute, under the 2023 plan for the drafting of engineering construction codes and standards (Jianbiao Han [2023] No. 42).

The main content of the 2025 partial revision is as follows:

1. the definitions of the terms have been amended and supplemented;

2. requirements for low-carbon raw materials, technologies and equipment have been added;
3. the pressure range of process steam has been adjusted;
4. a requirement has been added that stenters be fitted with waste gas collection and treatment equipment, waste heat recovery equipment, and spark detection and extinguishing equipment;
5. a new subclause 3.9, occupational safety and health, and related provisions have been added;
6. the corresponding steel structure codes have been added and the provisions relating to non-seismic areas deleted;
7. provisions on the safety management of the hazardous chemicals store have been added;
8. a requirement has been added for first-flush rainwater treatment before rainwater is discharged into the municipal network;
9. design requirements for the intelligent plant have been added;
10. the current standards and codes referred to have been checked and updated.

1 Scope

GB 50426 is the Chinese design code for dyeing and printing plants. Textile dyeing and finishing is one of the most water-, steam- and chemical-intensive industries there is, and it is where most of the environmental pressure on the Chinese textile chain falls; this document is what a design institute works to when it lays out such a plant. It covers the process design, including the process flow, the choice and arrangement of machines, the process pipework and what the process demands of the utilities; the general plan and transport; the architecture, including fire and explosion protection; the structure, with a whole subclause on the single-storey sawtooth building with exhaust shafts that is characteristic of this industry; water supply and drainage, including water reuse and wastewater recycling; heating, ventilation and air conditioning; electrical; power, covering steam, condensate recovery, thermal oil, fuel gas and compressed air; and storage, including the hazardous chemicals store. Six annexes give the process flows and the reference water, steam, heat and compressed air consumption of the main machines. This is the 2025 edition, carrying the partial revision effective 1 April 2026 that adds low-carbon requirements, stenter waste gas and waste heat equipment, occupational safety and health, first-flush rainwater treatment and the design of the intelligent plant.

3 Process design