

ICS 37.100.10
CCS J87



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

GB/T 44522-2024

**Printing machinery - Technical specification for centralized ink
supply system**

印刷机械 集中供墨系统技术规范

Issued on: September 29, 2024

Implemented on: September 29, 2024

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

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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. 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. This document was proposed by the China Machinery Industry Federation. This document is under the jurisdiction of the National Printing Machinery Standardization Technical Committee (SAC/TC192). This document was drafted by: Guangzhou Qiancai Paper Printing Co., Ltd., Shenzhen Yutong Packaging Technology Co., Ltd., Zhongshan Baoshi Printing Equipment

Co., Ltd., Foshan Lacker Fluid Technology Co., Ltd., Beiren Intelligent Equipment Technology Co., Ltd., Wuhan Jerrys Machinery Co., Ltd. Co., Ltd., Guangdong Wangying Environmental Protection Packaging Industry Co., Ltd., Beijing Zhongke Printing Co., Ltd., Zhejiang Shuchuang Intelligent Equipment Co., Ltd., Beijing Li Madun Pacific Packaging Co., Ltd., Shanghai Publishing and Printing College, Zhejiang Maili Electromechanical Co., Ltd., Zhejiang Yaxin Packaging Materials Co., Ltd. Ltd., Zhejiang Zhongte Machinery Technology Co., Ltd., Suzhou Coswood Color Technology Co., Ltd., Shenzhen Runtianzhi Digital Equipment Co., Ltd. Co., Ltd., Beijing Xinhua Printing Co., Ltd., Wenzhou Globo Electronics Co., Ltd., Hubei Jinghua Color Printing Co., Ltd., Yunnan Provincial Government The Second Printing Center of the Administrative Bureau of Finance, Zhejiang Meige Machinery Co., Ltd., Suzhou Yutong Printing Co., Ltd., Guangdong Xingyi Digital Printing Co., Ltd. Co., Ltd., China Printing Science and Technology Research Institute Co., Ltd. The main drafters of this document are. Wu Wei, Wang Zejie, Liang Yongjun, Su Xiaoyan, Zhao Bohang, Ren Yuanhua, Liu Yangcheng, Liu Shuiyuan, Wang Mingli, Qiu Shuai, Ruan Wei, Tian Min, Li Xiaoping, Zhong Shihui, Zeng Jianjun, Cai Yongbin, Huang Feng, Wu Guanhua, Qiao Junwei, Gong Yun, Ye Wenzhe, Liu Bing, Kong Xiuying, Lin Xiaoyu, Lin Shichao, Sha Jihong, Xu Xing, Liu Hongnian, Li Liang, Wen Cun, Fang Qinshuang, Huang Xingbo, Hu Chao, Gao Ziqiang, Ma Xingyu, Mu Yunhong, Liu Guofang, Lou Bo, Zhao Xiaobing, Huang Zhen, Peng Ming, Ning Wenxiong.

The centralized ink supply system can supply ink safely, stably, reliably and quantitatively, freeing the printer operator from the need to frequently add ink. In the future, it will not only improve the utilization rate of ink, but also reduce the emission of volatile organic compounds (VOCs) and protect the ecological environment. Printing companies have installed and renovated centralized ink supply systems. Since centralized ink supply systems need to be based on user needs and workshop layout At present, there is no scientific detection and evaluation method for the testing and acceptance of the centralized ink supply system. This document combines the standardization of the centralized ink supply system design process with the standardization of system components.

Standardizing and requiring the entire process of installation, use, and upgrading and transformation will be conducive to the promotion and application of centralized ink supply technology in the industry, improving the quality of the products from the source. Improve ink utilization efficiency, reduce the cost of ink centralized supply transformation, accelerate printing enterprises to achieve green control of production process, and build a green, circular, The low-carbon printing ecology supports the high-quality development of the printing industry. Technical specification for centralized ink supply system of printing machinery

1 Scope

GB/T 44522-2024 sets the technical specification for centralised ink supply systems in printing machinery. Feeding ink from bulk tanks through pumped pipework to the presses,

instead of by hand from cans, removes the largest source of colour variation and of solvent exposure in a pressroom, and it is one of the retrofits Chinese printers make most often. The system has to move a shear-thinning fluid through long lines without settling or air entrainment, and it introduces a fire and cleaning problem the press did not previously have. The standard sets the classification and structural composition, the design requirements for the pump station, the pipework, the ink filling device and the control system, the system performance requirements, the upgrading of an existing press, the safety protection requirements, the installation requirements, and the performance testing, inspection and documentation handover. It took effect on 29 September 2024.

This document defines the classification and structural composition of the centralized ink supply system, and stipulates system design, system performance, upgrade and transformation, safety protection, Requirements for installation, performance inspection, acceptance inspection, document handover and maintenance. This document is applicable to centralized ink supply systems for offset printing presses, centralized ink supply systems for gravure, flexographic and screen printing presses. For reference only, not suitable for centralized ink supply systems for digital printing presses.

2 Normative references

The contents of the following documents constitute 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/T 5226.1-2019 Electrical safety of machinery Electrical equipment of machinery Part

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 The ink pump is used to transport the ink stored in the ink tank (barrel) through a closed pipeline to one or more printing presses to realize the ink supply. The corresponding system.

Note. The capacity of the ink storage tank is usually.200L.

3.2 Ink pump inkpump A device that delivers or pressurizes ink through a gear pump or a plunger pump.

3.3 Ink pump station inkpumpstation The area where one or more ink pumps and their associated equipment are located.

Note. Accessories do not include ink tanks.

3.4 Inkadding device A device that adds a certain amount of ink to the ink fountains (or ink trays, ink chambers) of each color group of a printing press through ink supply tubes.

4 Fabrication and installation

GB/T 20801.6-2020 Pressure piping specification Industrial piping Part

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