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

GB/T 23723.5-2025

Cranes - Safe use - Part 5: Bridge and gantry cranes

起重机 安全使用 第5部分：桥式和门式起重机

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Table of Contents

1 Scope	1
2 Normative references	1
3 Terms and Definitions	1
4 Safe working system	1
5 Personnel competencies and responsibilities	2
6 Security	3
7 Selection of cranes	5
8 Crane Setup	5
9 Installation and removal	6
10 Working procedures and safety precautions	6
11 Working Condition	7
12 Lifting and load handling	8
13 Testing, inspection and condition monitoring	8
14 Evaluation and Retirement	8

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 5 of GB/T 23723 "Safe use of cranes". GB/T 23723 has been published in the following parts.

5. Bridge and gantry cranes. 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 Technical Committee for Standardization of Lifting Machinery (SAC/TC227). This document was drafted by: Beijing Kezhengping Engineering Technology Testing Institute Co., Ltd., Beijing Hoisting and Conveying Machinery Design and Research Institute Co., Ltd. Shanghai Zhenhua Heavy Industries Co., Ltd., Shanghai Jinyi Testing Technology Co., Ltd., Zhejiang Seaport Investment and Operation Group Co., Ltd. China Yangtze Power Co., Ltd., Taiyuan Heavy Industry Co., Ltd., Zhejiang Special Equipment Science Research Institute, Shanghai Special Equipment Supervision and Inspection Technology Research Institute, Henan Weihua Heavy Machinery Co., Ltd., Henan Mining Crane Co., Ltd., Hangzhou

Guodian Machinery Equipment Design Research Institute Co., Ltd., Zhejiang China Construction Road and Bridge Equipment Co., Ltd., Eurocrane Heavy Industries Co., Ltd., Dalian Borui Heavy Industries Co., Ltd., Zhongantai Safety Technology Co., Ltd., Nanjing Special Equipment Safety Supervision and Inspection Institute, Ningbo Special Equipment Inspection Institute, Sany Hai Yangzhou Heavy Industry Co., Ltd., Jiangxi Hoisting Machinery General Factory Co., Ltd., Henan Dafang Heavy Machinery Co., Ltd., Qingdao Qianwan Container Terminal Co., Ltd. Limited Liability Company, Taizhou Branch of Jiangsu Special Equipment Safety Supervision and Inspection Institute, Weite Technology Co., Ltd., Henan Institute of Science and Technology, Guangdong Province Shunde Testing Institute of Special Equipment Testing Institute, Zhengzhou Xindafang Heavy Industry Technology Co., Ltd., Henan Xinke Crane Co., Ltd., Hubei Yichang Branch of Special Equipment Inspection and Testing Institute, Beijing Beiqiyiouti Intelligent Technology Co., Ltd., Henan Zhengda Hoisting Equipment Co., Ltd., Nanjing Switchgear Co., Ltd., Shandong Shenzhou Machinery Co., Ltd., Zhangjiagang Branch of Jiangsu Special Equipment Safety Supervision and Inspection Institute, Ningbo Daxie Container Terminal Co., Ltd., China Railway 11th Bureau Group Hanjiang Heavy Industry Co., Ltd., Qingdao Port Equipment Manufacturing Co., Ltd., Xi'an Special Equipment Inspection and Testing Institute, China Railway Seventh Bureau Group Wuhan Engineering Co., Ltd., China Construction Sixth Bureau (Suzhou) Construction Engineering Co., Ltd., China Communications Construction Road and Bridge Huadong Engineering Co., Ltd., China Railway No.

9 Bridge Engineering Co., Ltd., Ningbo Beilun Third Container Terminal Co., Ltd., China Communications Construction Road and Bridge Construction Co., Ltd. company. The main drafters of this document are. Bian Shujun, Lu Jianhu, Liu Wusheng, Xu Wenbin, Li Jicheng, Zhang Pei, Lin Weiguo, Feng Hualong, He Xiaoping, Zhou Liangliang, Wang Xinjing, Jiang Jianfeng, Xu Haixiang, Cui Peng, Fu Yixiao, Huang Jingen, Tong Jucang, Yuan Xiufeng, Li Ning, Zhou Guoyi, Wang Shuang, Zhang Yiyi, Liu Munan, Zou Xudong, Cao Xiangyang, Liu Yang, Xu Feng, Xie Bangtian, Nie Fuquan, Wen Qingshan, Dai Yu, Sun Detao, Cai Xiaojie, Deng Daijun, Sun Cheng, Hu Jianhong, Wu Yiguo, He Hui, Zhang Weibin, Liu Da, Liu Xiao, Sun Hua, Li Hongchang, Wang Xueqiang, Qiu Feng, Zhou Jijun, Liang Hui, Zhang Hailong, Zhong Xiaohui, and Zhang Fenghuang.

This document is formulated to regulate the safe use of bridge and gantry cranes in my country and to reduce safety accidents involving bridge and gantry cranes. GB/T 23723 "Safety in the Use of Cranes" is planned to consist of 5 parts.

- 1.General principles. The purpose is to specify the general principles for the safe use of cranes.
- 2.Mobile cranes. The purpose is to specify the requirements for the safe use of mobile cranes.
- 3.Tower cranes. The purpose is to specify the requirements for the safe use of tower cranes.

4. Jib cranes. The purpose is to specify the requirements for the safe use of jib cranes.

5. Bridge and gantry cranes. The purpose is to specify the requirements for safe use of bridge and gantry cranes. Safe use of cranes Part

1 Scope

China's national standard for the safe use of bridge and gantry cranes. It is Part 5 of GB/T 23723 and specifies the requirements for the safe use of overhead travelling bridge cranes and gantry cranes, covering the responsibilities, the personnel, the planning of the lift, the operation, the inspection and the maintenance. The series it belongs to is about use rather than design: a crane can be designed and built entirely to standard and still kill somebody, because almost all crane accidents are operational. The distinctive hazards of a bridge or gantry crane follow from where it works. It runs on rails above a working area, so its load travels over people who are doing something else and are not watching it, and there is no exclusion zone unless one is created. It has no boom and no radius, so the geometry that dominates mobile crane safety is absent - and the hazards that replace it are the ones peculiar to this type: two cranes on the same runway colliding, the load swinging when the bridge or trolley stops because the hoist rope is a pendulum, the load being dragged sideways when a crane is used to pull rather than lift, which overloads the structure in a direction it was not designed for, and the crane being used to lift a load that is still bolted, frozen or otherwise attached. So the standard covers the planning of the lift and the assessment of the load, the slinging and attachment, the signalling and communication including where the operator cannot see the load, the operating rules, the limits on side pull and on travelling with a suspended load, the pre-use checks, the periodic inspection and the maintenance regime, and the competence required of the operator and the slinger. Issued on 24 January 2025 and in force since 1 August 2025.

This document specifies the safe work system for bridge and gantry cranes, personnel competence and responsibilities, safety, crane selection, crane installation, installation and disassembly, working procedures and safety precautions, working conditions, lifting and load handling, testing, inspection and condition monitoring, evaluation Safety use requirements such as evaluation and scrapping. This document applies to bridge and gantry cranes defined in GB/T 6974.5. This document does not apply to human-driven (not power-driven) bridge and gantry cranes.

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/T 2893 (all parts) Graphical symbols, safety colors and safety signs

GB/T 5082 Crane hand signals

GB/T 6974.1 Crane terminology Part

3 Terms and definitions

The terms and definitions defined in GB/T 6974.1, GB/T 6974.5 and GB/T 23723.1-2009 apply to this document.

4 Safety work system

4.1 The user shall determine the type and complexity of the bridge crane and gantry crane (hereinafter referred to as "crane") used, as well as the specific The safety work system should comply with the requirements of

4.1 of GB/T 23723.1-2009. It shall also meet the requirements of

5 Bridge and gantry cranes

GB/T 15052 General principles for crane safety signs and hazard graphic symbols

GB/T 20303.1 Crane cab and control station Part