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

GB/T 24810.3-2025

Replacing GB/T 24810.3-2009

**Cranes - Limiting and indicating devices - Part 3: Tower cranes
(English Translation)**

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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.

This document is Part 3 of GB/T 24810 "Limiters and indicators for cranes". GB/T 24810 has been published as follows part.

- Part 1: General provisions;
- Part 2: Mobile cranes;
- Part 3: Tower cranes;
- Part 4: Jib cranes;
- Part 5: Bridge and gantry cranes.

This document replaces GB/T 24810.3-2009 "Crane limiters and indicators Part 3: Tower cranes" and Compared with GB/T 24810.3-2009, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- a) The terms and definitions have been changed (see Chapter 3, Chapter 3 of the 2009 edition);
- b) Added the rated lifting capacity requirements and changed the start-up requirements for the rated lifting capacity limiter (see 5.2, 5.2 of the 2009 edition);
- c) The conditions for the rated lifting capacity indicator to send out an alarm signal have been changed (see 6.2, 6.3, and 6.2, 6.4 of the 2009 edition);
- d) Deleted the following. "When a tower crane is equipped with a remote control device, a rated lifting capacity indicator may be installed on the crane and shall be able to give a visual alarm." Signal" (see 6.3 of the 2009 edition);
- e) Changed the requirements for motion limiters (see Table 1, Table 1 of the 2009 edition);
- f) The indicator equipment requirements have been changed (see 8.1 and Table 2, 8.1 and Table 2 of the 2009 edition);
- g) Added event recorder and data recorder content (see Chapter 10);
- h) Added the limitations and indicating device requirements for climbing systems (see Chapter 11).

This document is modified to adopt ISO 10245-3:2019 "Crane limiters and indicators - Part 3: Tower cranes".

The technical differences between this document and ISO 10245-3:2019 and their reasons are as follows.

- a) The normative reference GB/T 24810.1 replaces ISO 10245-1 (see Chapter 3) to adapt to my country's technical conditions and adds operability;
- b) The normative reference GB/T 18209.1 replaces IEC 61310-1 (see 6.7, 8.3) to adapt to my country's technical conditions, and adds Increase operability;

c) Added the content of the folding arm boom indicator device (see Table 2). The indicator on the folding arm boom can provide important assistance to the driver;

d) Deleted the limitation of climbing system and the limitation of balance torque in indicating device (see 11.1 of ISO 10245-3:2019) and the limitation of working torque in the climbing system and indicating device.

Adjust the pressure (see 11.2 of ISO 10245-3:2019). This requirement is not currently applicable to my country's technical conditions.

The following editorial changes have been made to this document.

a) ISO 4306-3 is replaced by the informative reference GB/T 6974.3 (see Chapter 1);

b) ISO 10245-1 is replaced by the informative reference GB/T 24810.1 (see Chapter 1, 8.2);

c) Replace "sliding assembly" in Table 1 of ISO 10245-3:2019 with "current collector" (see Table 1);

d) Replace "X" in 8.1 of ISO 10245-3:2019 with "sqrt" (see 8.1).

Introduction

Crane limiters and indicators are the core systems of crane safety work. Both international and domestic attention is paid to the research and development of relevant standards.

Optimization, GB/T 24810 aims to specify the safety requirements for domestic crane limiters and indicators and consists of five parts.

--- Part 1: General. The purpose is to specify the general requirements for crane limiters and indicators.

--- Part 2: Mobile cranes. The purpose is to specify the limiters and indicators of load, movement, performance and environment of mobile cranes.

display requirements.

--- Part 3: Tower cranes. The purpose is to specify special requirements for limiters and indicators of tower cranes.

--- Part 4: Jib cranes. The purpose is to specify the load, movement, performance and environmental limiters and indicators of jib cranes device requirements.

--- Part 5: Bridge and gantry cranes. The purpose is to specify the load, movement, performance and environmental conditions of bridge and gantry cranes.

Limiters and indicators requirements.

Crane limiters and indicators Part 3: Tower cranes

1 Scope

This document specifies the special requirements for limiters and indicators of tower cranes (hereinafter referred to as "tower cranes").

This document applies to tower cranes defined in GB/T 6974.3.

This document does not apply to terminal stops, such as buffers used to stop trolley luffing, gantry travel or boom luffing, nor does it apply to Tower crane installation, disassembly operations or configuration changes.

Note: GB/T 24810.1 specifies the general requirements for limiters and indicators of 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 5226.32-2017 Electrical safety of machinery - Electrical equipment of machinery - Part 32: Technical requirements for lifting machinery (IEC 60204-32:2008, IDT) GB/T 18209.1 Electrical safety of machinery - Instructions, signs and operations - Part 1: Requirements for visual, auditory and tactile signals (GB/T 18209.1-2010, IEC 61310-1:2007, IDT) GB/T 24810.1-2009 Crane limiters and indicators Part 1: General (ISO 10245-1:2008, IDT)

3 Terms and Definitions

The terms and definitions defined in GB/T 24810.1 and the following apply to this document.

Rated lifting capacity the design value of the net lifting capacity of a crane under specified working conditions (such as load position) and specified configuration (such as boom length).

Note: For the definition of net lifting capacity, see 8.1.3 of GB/T 6974.1-2008.

working space limiter working space limiter Device on a crane to prevent the risk of loads and/or crane components moving into confined spaces (area confinement system).

restricted space restricted space Limit the space into which the load and/or any crane components are moved.

Note: Depending on the conditions when not in operation, the boom and counter-arm may move