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

GB/T 20863.3-2025

Replacing GB/T 20863.3-2007

**Cranes - Classification - Part 3: Tower cranes
(English Translation)**

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Table of Contents

Preface

Introduction

1 Scope

2 Normative references

3 Terms and Definitions

4 Symbols

5 Classification of tower cranes

5.1 General Principles

5.2 Classification of prefabricated tower cranes

5.3 Classification of self-erecting tower cranes

5.4 Classification of mobile self-erecting tower cranes

Appendix A (Informative) Information on the tower crane classification system

References

Figure 1 Permissible design space for assembled tower crane

Table 1 Main symbols

Table 2 Classification of assembled tower cranes

Table 3 Classification of self-erecting tower cranes

Table 4 Classification of mobile self-erecting tower cranes

Table A.1 Tower crane overall working level A7

Table A.2 Working class Ac 7 for components, wire ropes and mechanisms

Table A.3 Stress history level S

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.

GB/T 20863 "Crane Classification" and GB/T 3811 "Crane Design Specifications", GB/T 22437 "Crane Load and Load GB/T 30024 "Capacity Verification of Crane Metal Structures", GB/T 30561 "Crane Rigid Bridge and Door Standards such as "Type Crane" together constitute the basic national standard system supporting crane design and calculation.

This document is Part 3 of GB/T 20863 Crane Classification. GB/T 20863 has been

published in the following parts.

- 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 20863.3-2007 "Classification of lifting machinery Part 3: Tower cranes" and GB/T 20863.3-Compared with 2007, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- Changed the scope (see Chapter 1, Chapter 1 of the 2007 edition);
- Added symbols (see Chapter 4);
- Changed the classification requirements (see Chapter 5, Chapter 4, Chapter 5 and Chapter 6 of the 2007 edition).

This document is equivalent to ISO 4301-3:2021 "Crane classification - Part 3: Tower cranes".

Introduction

Cranes are used in the field of material handling and their function is to lift and move loads within the rated lifting capacity.

The design of the crane needs to consider the operating tasks according to the use conditions to achieve the safety and security that meet the buyer's requirements.

Full level and lifespan.

Classification is a frame of reference between the purchaser and the manufacturer regarding the intended work a particular crane can be used for.

A system provides a rational basis for the design of structures and machines.

GB/T 20863 "Crane Classification" is the basic and universal standard in the field of crane design and calculation in my country.

In establishing the classification principles and methods of crane complete machine and its parts and mechanisms, promoting trade cooperation and technical exchanges, and providing Design, manufacturing, modification, maintenance, inspection and use, as well as the contract signing between the supply and demand parties, provide technical reference basis.

For the sake of consistency and coordination of standards, GB/T 20863 is planned to

consist of five parts.

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

Crane classification Part 3: Tower cranes

1 Scope

This document specifies the classification of tower cranes (hereinafter referred to as "tower cranes") as defined in ISO 4306-3 for construction projects and the standard operating conditions specify the specific requirements for steel structures, mechanisms, wire ropes and other components, which are mainly expressed by the following parameters.

- Number of working cycles;
- Load spectrum coefficient;
- Average displacement;
- Additional values of coefficients used in structural or mechanical calculations.

Tower cranes used in construction projects are specially equipped with hooks as lifting devices (spreaders).

For tower cranes intended for other purposes and/or equipped with other lifting devices (spreaders), other parameters may appear depending on their specific use.

Numeric value.

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 20863.1-2021 Crane classification Part 1: General principles (ISO 4301-1:2016, IDT)
GB/T 30024-2020 Capability verification for metal structures of cranes (ISO 20332:2016, IDT)
ISO 4306-3 Cranes - Vocabulary - Part 3: Tower cranes) Note. GB/T 6974.3-2024 Crane terminology Part 3: Tower cranes (ISO 4306-3:2016, IDT)

3 Terms and Definitions

The terms and definitions defined in GB/T 20863.1-2021 and ISO 4306-3 apply to this document.

4 Symbols

The symbols defined in GB/T 20863.1-2021 and GB/T 30024-2020 apply to this document, see Table 1.