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**GB**

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PEOPLE'S REPUBLIC OF CHINA

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**GB/T 24818.4-2017**

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**Cranes - Access, guards and restraints -**

**Part 4: Jib cranes**

起重机 通道及安全防护设施

第 4 部分：臂架起重机

(ISO 11660-4:2012, MOD)

**Issued on: October 14, 2017**

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## Foreword

GB/T 24818 "Crane passage and safety protection facilities" is divided into five parts:

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

This part is part 4 of GB/T 24818.

This part was drafted in accordance with the rules given in GB/T 1.1-2009.

This part, through redrafting method, modifies and adopts ISO 11660-4:2012 "Cranes - Access, guards and restraints - Part 4: Jib cranes".

As compared with ISO 11660-4:2012, this part has no change in structure.

The technical differences and reasons for this part and ISO 11660-4:2012 are as follows:

- Regarding the normative references, this part has made technical adjustments to be consistent with the standards related to "mechanical safety" in China, as follows:

This part uses GB 23821 instead of ISO 13852 (GB 23821-2009, ISO 13857:2008, IDT. ISO 13857:2008 instead of ISO 13852).

This part has made the following editorial changes:

- In order to be consistent with the provisions in the text, ADD the symbol "<" in front of the number 1.8 in Figure 1.

This part was proposed by the China Machinery Industry Federation.

This part shall be under the jurisdiction of the National Crane Machinery Standardization Technical Committee (SAC/TC 227).

Drafting organizations of this part: Water Transport Science Research Institute if Ministry of Transport, Wuhan University of Technology, Beijing Crane Transportation Machinery Design and Research Institute, Shanghai International Port (Group) Co., Ltd., Qinhuangdao Port Co., Ltd., Shanghai

## **Cranes - Access, guards and restraints -**

### **Part 4: Jib cranes**

#### **1 Scope**

This part of GB/T 24818 specifies the special requirements for the access, guards and restraints of jib cranes (hereinafter referred to as cranes).

GB/T 24818.1 determines the general requirements for the access to the console and other parts of the crane during normal operation, inspection, maintenance, installation, disassembly of cranes as defined in GB/T 6974.1, as well as the general requirements for safety protection devices to protect the personnel on or near crane from being injured by the moving parts, descending parts, rotating parts.

This part applies to the jib crane as defined in GB/T 6974.1.

#### **2 Normative references**

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are applicable to this standard.

GB 23821 Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs (GB 23821-2009, ISO 13857:2008, IDT)

GB/T 24818.1-2009 Cranes - Access, guards and restraints - Part 1: General (ISO 11660-1:2008, IDT)

#### **3 Terms and definitions**

The terms and definitions as defined in GB/T 24818.1 apply to this document.

#### **4 Access**

##### **4.1 General**

All consoles and other parts of the crane shall be accessed through walkways,

## 5 Safety protection facilities

### 5.1 Protection of moving parts

When entering all consoles and other parts of the crane, the moving parts shall be protected by a safety distance in accordance with GB 23821 or by the installation of detachable or fixed restraints. For moving parts without restraints, it shall provide warning information.

In commonly-used access areas, open gears, chain drives and similar transmissions shall be fitted with restraints. Exceptionally, for large-slewing gears, if the engagement point with the pinion gear is far enough away from the frequently-used access (category-1) according to the requirements of GB 23821, it is not necessary to install a restraint.

If the restraints cannot be provided due to the structure of crane, for example, the limited space area within the connection range between the upper slewing crane or the slewing bearing, the slewing bearing and the slewing platform, it shall provide the warning information.

Restraints for walkways or work platforms shall be designed in accordance with the requirements of GB/T 24818.1.

The hook pulley block is so designed as to minimize the risk of the hand being caught between the wire rope and the pulley.

Note: For functional inspection and maintenance, reels, brakes, couplings are generally not covered or protected, because there is usually no access to these mechanisms during normal operation of the crane.

### 5.2 Preventing the fall of crane's components and accessories

The design, assembly, fixation of crane components such as gears, pulleys, casings, cabinets shall be prevented from falling during normal operation.

The casing, guards, access doors shall be hinged or otherwise designed to prevent them from falling.

The pinion of the slewing mechanism shall be provided with a casing or other means, to prevent it from falling due to breakage or crushing.

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Accountable person and shareholder: Wayne Zheng

About Us (Goodwill, Policies, Fair Trading...): <https://www.chinesestandard.net/AboutUs.aspx>

Contact: Wayne Zheng, [Sales@ChineseStandard.net](mailto:Sales@ChineseStandard.net)

Linkin: <https://www.linkedin.com/in/waynezhengwenrui/>

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