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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 10183.1-2018

Replacing GB/T 10183.1-2010

Cranes -- Tolerances for wheels and travel and traversing tracks -- Part 1: General

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Table of Contents

Foreword

GB/T 10183 "Crane wheel and cart and trolley track tolerance" is divided into the following two parts.

--- Part 1. General;

--- Part 4. Boom crane.

This part is the first part of GB/T 10183.

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

This part replaces GB/T 10183.1-2010 "Crane wheels and cart and trolley track tolerances Part 1. General", and

The main technical contents of GB/T 10183.1-2010 are as follows.

--- Modify the definition of the track tolerances bs, ch, and clarify the detection length range.

--- The definition of the wheel diameter tolerance deltaD is revised.

--- The inclination of the shaft hole and the center of the axle phik and phir are specified in

accordance with ISO 12488-1.

--- The parallelism tolerance Fmax of the end stop or damper is specified in accordance with ISO 12488-1.

--- Corrected the figures, definitions and tolerances in Tables 2 to 7.

This section uses the translation method equivalent to ISO 12488-1.2012 "Crane wheels and cart and trolley track tolerances Part 1.

General Principles (English version).

The documents of our country that have a consistent correspondence with the international documents referenced in this part are as follows.

---GB/T 1182-2008 Product Geometry Specification (GPS) Geometric Tolerance Shape, Orientation, Position and Runout Tolerance

(ISO 1101.2004, IDT);

---GB/T 1800.2-2009 Geometrical Product Specifications (GPS) Limits and fits Part 2. Standard tolerance classes and

Hole and shaft limit deviation table (ISO 286-2. 1988, MOD);

---GB/T 6974.1-2008 Crane terminology Part 1. General terminology (ISO 4306-1.2007, IDT).

For ease of use, the following editorial changes have been made in this section.

---Editive adjustment of some tolerance symbols in ISO 12488-1.2012, at the same time, tolerance symbols and corresponding schematics are different

Zhi also made a correction;

--- Table 2 (continued) The tolerance value of F is changed from 0.8S, 1.0S, etc. to +/-0.8S, +/-1.0S, etc.;

--- Table 5 (continued) F tolerance value 3 is changed from +/-12.6 to +/-12.5.

This part was proposed by the China Machinery Industry Federation.

This part is under the jurisdiction of the National Machinery Standardization Technical Committee for Lifting Machinery (SAC/TC227).

This section is responsible for drafting units. Dalian Huarui Heavy Industry Group Co., Ltd., Beijing Crane Transportation Machinery Design and Research Institute.

Participated in the drafting of this section. China National Accreditation Center for Conformity Assessment, Suzhou Tongan Hoisting Machinery Co., Ltd., Franck Heavy Industry

Co., Ltd., Shanghai University of Engineering and Technology, Henan Weihua Heavy Machinery Co., Ltd., Suzhou Tengjiao Electric Equipment Co., Ltd.

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Introduction

The requirements specified in this part of GB/T 10183, as well as the guidelines and design guidelines given, reflect the current design level of lifting machinery.

The requirements, guidelines and design guidelines are given. The stated guidelines reflect the ability to ensure that basic safety requirements are met and that the components are adequate

Successful design experience for service life. Deviation from these criteria generally leads to increased risk or reduced life. But it should also be acknowledged that technological innovation and

The adoption of new materials, etc., may result in new solutions that ultimately result in equal or higher safety and durability.

Crane wheel and cart and trolley track tolerances

Part 1. General

1 Scope

This part of GB/T 10183 specifies the tolerances for the installation and operation of cranes and their tracks as defined in ISO 4306-1. this

Part of the purpose of these requirements is to eliminate the overload caused by the normal size or shape deviation of the structure, thereby improving the crane's operation.

Safety and ensure that components reach their expected life.

The tolerances specified in this section are limit values. This section does not apply to elastic deformation caused by load effects. To achieve the intended usability

It can be required to consider these elastic deformations in the design phase using other design criteria.

Specific tolerance values for specific types of cranes are specified in other parts of ISO /IEC 15408.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

ISO 286-2 Geometrical Product Specifications (GPS) Limits and fits Part 2. Standard tolerance classes and

Table [Geometricalproductspecifications(GPS)-Limitsandfits-Part 2. Tablesofstandardtolerance

Classesandlimitdeviationsforholesandshafts]

ISO 1101 Product Geometry Specification (GPS) Geometric Tolerance Shape, Orientation, Position, and Runout Tolerance [Geometrical

Productspecifications(GPS)-Geometricaltolerancing-Tolerancesofform,orientation,locationa nd

Run-out]

ISO 4306-1 Crane Terminology Part 1. Generic Terminology (Cranes-Vocabulary-Part 1. General)

3 Terms and definitions

The following terms and definitions apply to this document.

3.1

Construction tolerance constructiontolerance

Before the crane is put into operation, during the new installation, modification, reassembly or repair of the assembled crane, the assembly of the crane and its track is produced.

The deviation from the specified size of the raw.

Note 1. This applies to newly installed or repaired, modified cranes and their tracks.

Note 2. This magnitude can be expressed either by the absolute value of the limit dimension deviation or by the geometric tolerance.

3.2

Operating tolerance operationaltolerance

After the crane and its track are used, the allowable amount of deviation from the specified size is generated.

Note. This magnitude can be expressed either by the absolute value of the limit dimension deviation or by the allowable geometric deviation.