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

GB/T 23724.1-2016

Replacing GB/T 23724.1-2009

**Cranes -- Inspections -- Part 1: General
(English Translation)**

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Table of Contents

Foreword ...	3
1 Scope ...	5
2 Normative references ...	5
3 Terms and definitions ...	5
4 General ...	6
5 Inspections ...	7
6 Methods of inspection ...	12
7 Inspection personnel ...	13
8 Precautions for inspection ...	13
9 Repairs ...	13
10 Records ...	14
11 Change of rated capacity ...	15
12 Limiting and indicating devices ...	15

Foreword

GB/T 23724 consists of 5 parts under the general title "Cranes - Inspections":

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

This Part is Part 1 of GB/T 23724.

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

This Part replaces GB/T 23724.1-2009 "Cranes - Inspections - Part 1: General";

compared with GB/T 23724.1-2009, main technical changes are as follows:

- MODIFY the scope (see Clause 1 of this Part, Clause 1 of 2009 edition);
- ADD the terms and definitions (see Clause 3);
- MODIFY the general requirements (see Clause 4 of this Part, Clause 3 of 2009

edition);

- MODIFY the classification of inspection (see Clause 5 of this Part, Clause 4 and Clause 5 of 2009 edition);
- MODIFY the requirements for methods of inspection (see Clause 6 of this Part,

5.3 of 2009 edition);

- MODIFY the requirements for inspection personnel (see Clause 7 of this Part, 5.2 of 2009 edition);
- ADD the requirements for precautions and repairs (see Clause 8 and Clause 9 of this Part);
- MODIFY the records of inspection results (see Clause 10, 5.4 of 2009 edition);
- ADD the requirements for "Change of rated capacity" and inspection requirements for "Limiting and indicating devices" (see Clause 11 and Clause 12 of this Part).

This Part uses the translation method to identically adopt ISO 9927-1: 2013 "Cranes - Inspection - Part 1: General".

The national standards having a consistent correspondence with the international documents normatively referenced in this Part are as follows:

- GB/T 6974 (all parts) Cranes - Vocabulary [ISO 4306 (all parts)]
- GB/T 5905-2011 Cranes - Test code and procedures (ISO 4310:2009, IDT)
- GB/T 22437 (all parts) Cranes - Design principles for loads and load combinations [ISO 8686 (all parts)]
- GB/T 23723.1-2009 Cranes - Safe use - Part 1: General (ISO 12480-1:1997, IDT)
- GB/T 24810.1-2009 Cranes - Limiting and indicating devices - Part 1: General (ISO 10245-1:2008, IDT)
- GB/T 25196.1-2010 Cranes - Condition monitoring - Part 1: General (ISO 12482-1:1995, IDT)
- GB/T 28758-11 Cranes - Competency requirements for crane inspectors (ISO 23814:2009, IDT)

This Part has made the following editorial modifications:

- NUMBER 3 'NOTE' in 5.1;
- NUMBER 4 'NOTE' in Table D.1.

This Part is proposed by China Machinery Industry Federation.

This Part is under the jurisdiction of National Technical Committee on Crane Machinery of Standardization Administration of China (SAC/TC 227).

Responsible drafting organizations of this Part: Shanghai Baosong Heavy Machinery Engineering (Group) Co., Ltd., Beijing Materials Handling Research Institute.

Participating drafting organizations of this Part: Guangxi Construction Engineering Group Construction Machinery Manufacturing Co., Ltd., Ningbo Aotu Heavy Industry Co., Ltd., Weihua Group Co., Ltd., Elephant King Heavy Industry Co., Ltd.

Main drafters of this Part: Zhang Pei, Tao Huaqiang, Lin Yong, Zhao Xueming, Liu Yonggang, Li Hongwei.

The historical version of the standard replaced by this Part is as follows:

- GB/T 23724.1-2009.

Cranes - Inspections - Part 1: General

1 Scope

This Part of GB/T 23724 specifies the general requirements for inspections to be carried out on cranes as defined in ISO 4306-1. Additional requirements for particular types of cranes are intended to be covered by relevant specific parts of GB/T 23724.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 4306 (all parts) Cranes - Vocabulary

ISO 4310 Cranes - Test code and procedures

ISO 8686 Cranes - Design principles for loads and load combinations

ISO 10245-1 Cranes - Limiting and indicating devices - Part 1: General

ISO 12480-1 Cranes - Safe use - Part 1: General

ISO 12482-1 Cranes - Condition monitoring - Part 1: General

ISO 23814 Cranes - Competency requirements for crane inspectors

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4306 and the following apply:

3.1

critical component

Component, the failure of which would result in a risk to the health and safety of persons using the crane or located in its vicinity.

3.2

l) emergency retrieval system.

5.6.3 Written report and follow-up

A written report shall be furnished on completion of the inspection. An expert engineer shall assess the results and shall

- a) specify the defects, wear and where attention is necessary to ensure its continued safe operation,
- b) identify components that require particular attention in subsequent periodic inspections, and
- c) determine the reasonable practicability of applying the requirements of the latest edition of the relevant Standard.

For those cranes and components listed in 5.6.1 b) and 5.6.2 e), the assessment should be supervised by an expert engineer.

Following the major inspection, a deemed design life, where required, shall be determined by the expert engineer (see Annex D) supervising the last major inspection. Subsequently, the crane shall either be subjected to the programme of inspection as part of the periodic inspection specified in 5.4, or reassessed by a competent person within a five-year period. The critical components identified by the assessment shall