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

GB/T 26477.1-2011

**Cranes -- Design calculation for rail wheels and associated
trolley track supporting structure -- Part 1: General**

起重机 车轮和相关小车承轨结构的设计计算 第1部分：总则

(English Translation)

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Foreword

GB/T 26477 "crane rail wheels and associated trolley bearing structure design calculation" consists of five parts.

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

This section GB/T Part of 126,477.

The partial modification of the use of ISO 16881-1:2005 "Cranes wheel design calculations and associated trolley track bearing structures - Part 1. General Then "(in English).

This part of ISO 16881-1:2005 main technical differences are as follows.

--- Chapter 2 of this section with GB/T 22437.1 "Design principles for loads and load combinations - Part 1. General" and GB/T 22437.5 "Design principles for loads and load combinations - Part 5. Bridge and gantry cranes" Generation for the ISO 16881-1:2005 is referenced in ISO 8686-1 and ISO 8686-5, the two countries adopt international standards are to modify the system Standards, including the breakdown of load factor and resistance factor γ_{m} γ_{m} values \u200b\u200bpredetermined ISO 8686-1 and ISO 8686-5 are difference;

--- In the load combination table also increases the risk of high coefficient γ_{m} .

This section also made the following editorial changes.

- The "this part of ISO 16881" with the words "GB/T 26477 in this section";
- With a decimal point instead of a comma as the decimal point, "";
- Remove the ISO 16881-1:2005 Foreword;
- For ISO 16881-1:2005 international standard referenced with the international standard has been adopted as the standard instead of the corresponding country, it has not been adopted as the standard of a direct reference to international standards;
- Of ISO 16881-1:2005 and Annex A 4.1.6, 4.2 effective flange width bc formulas and references [4] editorial errors revised.

Appendix A of this section and Appendix B is an informative annex.

This part is proposed by China Machinery Industry Federation.

This part of the National Standardization Technical Committee crane (SAC/TC227) centralized.

This section drafted by. DHI DCW Group Co., Ltd.

1 Scope

This section GB/T 26477 for selection orbit crane cast iron or steel wheel size requests, and is given by the formula wheel pressure local stress occurring in the crane structure.

2 Normative references

The following documents contain provisions which, through reference GB/T 26477 in this section constitute provisions of this section. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 6974.1 crane terminology - Part 1. General terms (GB/T 6974.1-2008, ISO 4306-1:2007, IDT) GB/T 20863.1 crane classification - Part 1. General (GB/T 20863.1-2007, ISO 4301-1. 1986, IDT) GB/T 22437.1 crane design principles for loads and load combinations - Part 1. General (GB/T 22437.1-2008, ISO 8686-1. 1989, MOD) GB/T 22437.3 crane design principles for loads and load combinations - Part 3. Tower cranes (GB/T 22437.3-2008, ISO 8686-3:1998, IDT) GB/T 22437.5 crane design principles for loads and load combinations - Part 5. Bridge and gantry cranes (GB/T 22437.5-2008, ISO 8686-5:1992, MOD) Design principles ISO 8686-2 crane loads and load combinations - Part 2. Mobile cranes Design principles ISO 8686-4 crane loads and load combinations - Part 4. jib crane

3 Terms and Definitions

Terms and definitions GB/T 6974.1 established in this section apply to GB/T 26477 of.

4.1.1 Wheel Size

To determine the size of the wheel, check should be done as follows.

- a) check the capacity of the largest wheel wheel pressure in use;
- b) check the wheels to ensure the normal operation and no abnormal excessive wear.

Check the above calculation formula (1) and (2) below.

P_{max}

$b \cdot D \leq 1.9PL$ (1) $P_{mean} b \cdot D \leq PL$

$\cdot C1 \cdot c2$ (2)