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

GB/T 23892.3-2009

**Plain bearings -- Hydrodynamic plain tilting pad thrust bearings
under steady-state conditions -- Part 3: Guide values for the
calculation of tilting pad thrust bearings**

滑动轴承 稳态条件下流体动压可倾瓦块止推轴承 第3部分：可倾瓦块止推轴承计
算的许用值

(English Translation)

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Foreword

GB/T 23892 "under steady-state conditions bearing hydrodynamic tilting pad thrust bearing" consists of the following three parts.

- Part 1. calculation of tilting pad thrust bearing block stop;
- Part 2. tilting pad thrust bearing calculation function of the stops;
- Part 3. Calculate bearing tilting pad push the allowable value of the stops.

This part of GB/T 23892 Part 3.

This section identical with ISO 12130-3:2001 "hydrodynamic plain bearings under steady-state conditions tilting pad thrust bearing section 3 Score. tilting pad bearing push calculated allowable value "block only.

This section is equivalent translation ISO 12130-3:2001.

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

- "This International Standard" be replaced by "this section";
- With a decimal point instead of a comma as the decimal point, ",";
- Delete international standards foreword.

This part is proposed by China Machinery Industry Federation.

Bearing this in part by the National Standardization Technical Committee (SAC/TC236) centralized.

This section is responsible for drafting unit. Productivity Promotion Center in the machine.

Participated in the drafting of this section. Xi'an Jiaotong University, Shanghai, Zhejiang send Bearing Co., Ltd., Zhejiang Bearing Co., Ltd. Shanghai Branch, Zhejiang Oriental Bearing Co., Ltd., Zhejiang Changsheng Bearing Co., Ltd., Zhejiang SF Oilless Bearing Co., Ltd.

This part of the National Standardization Technical Committee Secretariat slide bearing

responsible for the interpretation.

This section first release.

GB/T 23892.3-2009/ISO 12130-3:2001

Introduction

To make the tilting pad according to GB/T 23892.1-2009 calculated thrust bearing to achieve sufficient operational reliability, calculated for high pressure ratio and/or extreme high speed operating condition, it is necessary to consider the heat, the elastic deformation, hydrodynamic and/or turbulence effects were More accurate calculation.

These values characterize the allowable operating limits depend on the size and geometry processing technology bearing tribological system. These are some of the experiences value. Even will be some impact in other areas, it is still possible to meet the operational reliability (see GB/T 23892.1-2009 Chapter 4).

GB/T 23892.3-2009/ISO 12130-3:2001 Under steady-state conditions Bearing Hydrodynamic tilting pad thrust bearings - Part 3.

Tilting pad thrust bearing calculated allowable value

1 Scope

This section GB/T 23892 specifies the GB/T 23892.1-2009 specified hydrodynamic tilting pad stop pushing Calculate bearing Allowable value.

Given allowable value can be modified to suit specific applications.

This section GB/T 23892 does not apply to heavy duty tilting pad thrust bearing.

2 Normative references

The following documents contain provisions which, through reference GB/T 23892 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.

By GB/T 23892.1-2009 Plain bearings steady state condition hydrodynamic tilting pad thrust bearings - Part 1. tilting pad Thrust bearing calculation (ISO 12130-1:2001, IDT) ISO 4381 multilayer plain bearings Plain bearings - Lead and tin casting alloys ISO 4382-1 plain bearings single and multi-cast copper alloy bearings ISO 4382-2 bearing single bearing forged copper alloy ISO 4383 sliding bearing thin wall bearing metal layers of material 3 to avoid the wear and tear damage to the allowable value Symbol definition and calculation

example see GB/T 23892.1-2009.

Lubrication. Lubricant should be clean and free of impurities because the impurities will increase wear and tear, strain and local overheating, which would weaken the sliding bearings Normal function. When necessary, the lubricant should be filtered.

Formula (1).

The formula takes into account the increase in the overall size of the bearing, increase manufacturing tolerances.

However, in this series of standards, processing methods and the actual status of the machine on a large machining tolerances, therefore, according to the formula Shaft flange error processing or thrust collar and exceed the allowable tolerances, will lead the thrust pad to fail. In addition, the machine start-up and How long in mixed lubrication work is also very important when downtime.

For higher rotational speed, it should increase the minimum allowable normal operation with the film thickness, so that shutdown will not arrive too quickly mixed Lubrication.

GB/T 23892.3-2009/ISO 12130-3:2001