SLOVENSKI STANDARD

SIST ISO 12167-2:2002

01-december-2002

Drsni leǵaji - Hidrostatiļ ni radialni drsni leǵaji z odtoļ nimi ǵlebovi pri stacionarnih pogojih obratovanja - 2. del: Karakteristiļ ne vrednosti za preraļ un oljnih hidrostatiļ nih radialnih drsnih leǵajev z drenaǵnimi ǵlebovi

Plain bearings -- Hydrostatic plain journal bearings with drainage grooves under steady-state conditions -- Part 2: Characteristic values for the calculation of oil-lubricated plain journal bearings with drainage grooves

Paliers lisses -- Paliers lisses radiaux hydrostatiques avec rainures d'écoulement fonctionnant en régime stationnaire -- Partie 2: Caractéristiques du calcul pour la lubrification des paliers lisses radiaux avec rainures d'écoulement

Ta slovenski standard je istoveten z: ISO 12167-2:2001

ICS:

21.100.10	Drsni ležaji	Plain bearings

SIST ISO 12167-2:2002 en

INTERNATIONAL STANDARD

ISO 12167-2

First edition
2001-12-01

Plain bearings — Hydrostatic plain journal bearings with drainage grooves under steady-state conditions —

Part 2:
Characteristic values for the calculation of oil-lubricated plain journal bearings with drainage grooves

Paliers lisses — Paliers lisses radiaux hydrostatiques avec rainures d'écoulement fonctionnant en régime stationnaire —

Partie 2: Caractéristiques du calcul pour la lubrification des paliers lisses radiaux avec rainures d'écoulement

Reference number
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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this part of ISO 12167 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 12167-2 was prepared by Technical Committee ISO/TC 123, *Plain bearings*, Subcommittee SC 4, *Methods of calculation of plain bearings*.

ISO 12167 consists of the following parts, under the general title *Plain bearings — Hydrostatic plain journal bearings with drainage grooves under steady-state conditions*:

— *Part 1: Calculation of oil-lubricated plain journal bearings with drainage grooves*

— *Part 2: Characteristic values for the calculation of oil-lubricated plain journal bearings with drainage grooves*

Plain bearings — Hydrostatic plain journal bearings with drainage grooves under steady-state conditions —

Part 2: Characteristic values for the calculation of oil-lubricated plain journal bearings with drainage grooves

1 Scope

This part of ISO 12167 lists, in graphic form, characteristic values used in the calculation of oil-lubricated plain journal bearings with drainage grooves.

2 Normative reference

The following normative document contains provisions which, through reference in this text, constitute provisions of this part of ISO 12167. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 12167 are encouraged to investigate the possibility of applying the most recent edition of the normative document indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 12167-1, *Plain bearings — Hydrostatic plain journal bearings with drainage grooves under steady-state conditions — Part 1: Calculation of oil-lubricated plain journal bearings with drainage grooves*

3 Characteristic values

See Figures 1 to 13 and Table 1.

The characteristic values given in this part of ISO 12167 are necessary for the calculation of oil-lubricated hydrostatic plain journal bearings in accordance with ISO 12167-1. They are based on the premises and boundary conditions specified therein. The values required for the calculation can be determined from the diagrams. Explanations concerning the symbols and calculation examples are included in ISO 12167-1. When designing a plain bearing the characteristic values listed in Table 1 can be used for optimized bearings.

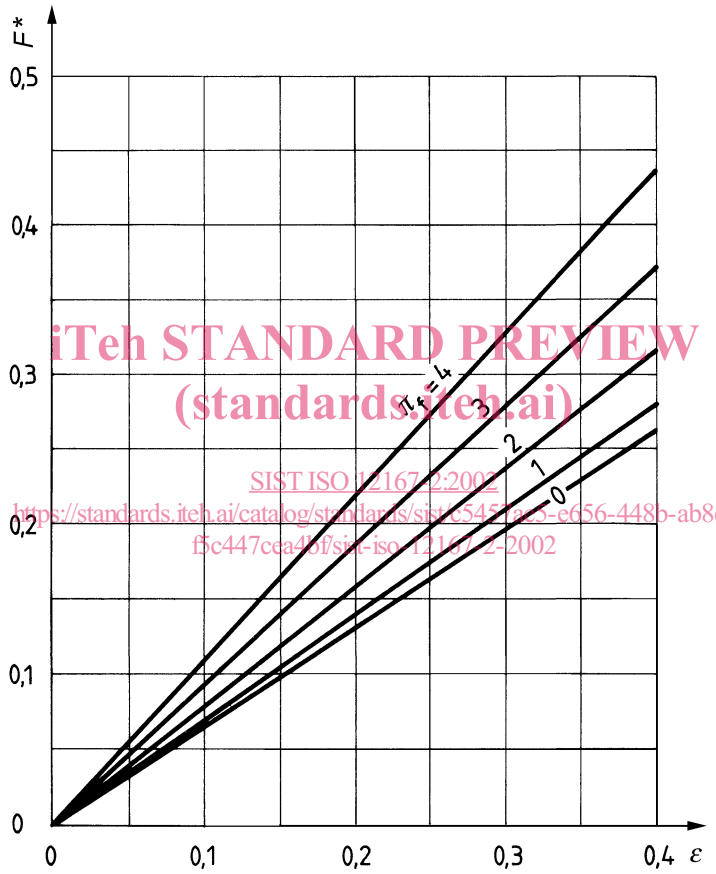

Figure 1 — Characteristic values of load-carrying capacity F^* as a function of the relative eccentricity ε for different relative frictional pressures π_f and four recesses, B/D = 1; l_{ax}/B = 0,1; l_c/D = 0,1; b_G/D = 0,05; ξ = 1; α = 0

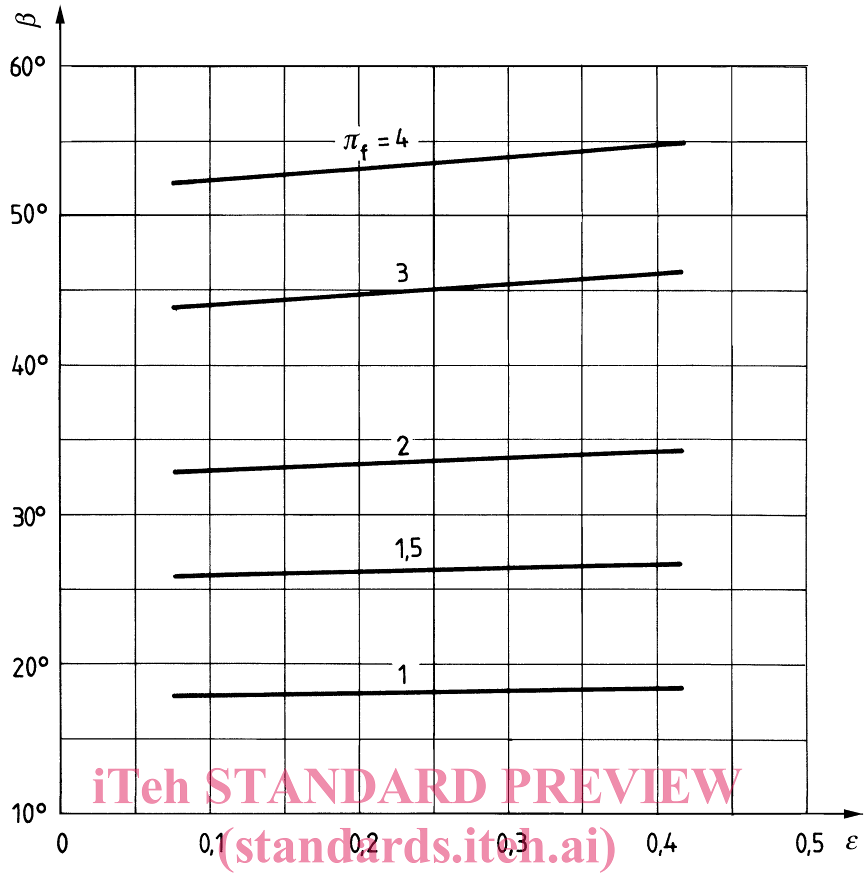

Figure 2 — Attitude angle β as a function of the relative eccentricity ε for different relative frictional pressures π_f and four recesses, B/D = 1; l_{ax}/B = 0,1; l_c/D = 0,1; b_G/D = 0,05; ξ = 1; α = 0

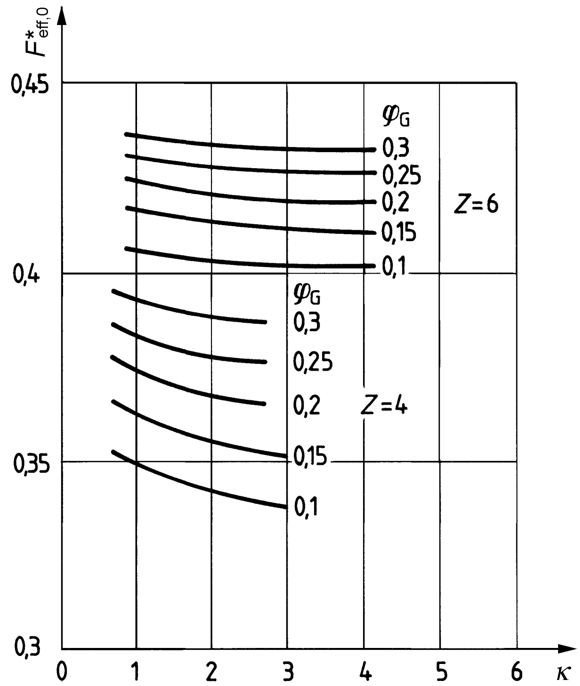

Figure 3 — Characteristic values of load-carrying capacity $F^*_{eff,0}$ for a relative eccentricity ε = 0,4 as a function of the resistance ratio κ and for different numbers of recesses Z and φ_G values, α = 0; ω = 0; ξ = 1 and four recesses