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Aerospace series - Spherical plain bearing in corrosion resisting steel with self-lubricating liner, wide series - Dimensions and loads - Inch series

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Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 4614

October 2021

ICS 49.035

Supersedes EN 4614:2009

English Version

Aerospace series - Spherical plain bearing in corrosion resisting steel with self-lubricating liner, wide series - Dimensions and loads - Inch series

Série aérospatiale - Rotule lisse, en acier résistant à la corrosion, à garniture autolubrifiante, série large - Dimensions et charges - Série en inches

Luft- und Raumfahrt - Gelenklager aus korrosionsbeständigem Stahl mit selbstschmierender Beschichtung, breite Reihe - Maße und Belastungen - Inch Reihe

This European Standard was approved by CEN on 12 July 2020.

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European foreword

This document (EN 4614:2021) has been prepared by the Aerospace and Defence Industries Association of Europe — Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of ASD-STAN, prior to its presentation to CEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2022, and conflicting national standards shall be withdrawn at the latest by April 2022.

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

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1 Scope

This document specifies the characteristics of a bearing, spherical plain in corrosion resisting steel with self-lubricating liner, wide series for aerospace applications.

These bearings are not intended for use of moving parts especially for control mechanism and operating system. They shall be used in the temperature range −55 °C to 163 °C.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 2030, *Aerospace series — Steel X105CrMo17 (1.3544) — Hardened and tempered — Bars — De ≤ 150 mm*

EN 2133, *Aerospace series — Cadmium plating of steels with specified tensile strength ≤ 1 450 MPa, copper, copper alloys and nickel alloys*

EN 2424, *Aerospace series — Marking of aerospace products*

EN 2755, *Aerospace series — Bearing, spherical plain in corrosion resisting steel with self-lubricating liner — Elevated load at ambient temperature — Technical specification*

EN 3161, *Aerospace series — Steel FE-PM3801 (X5CrNiCu17-4) — Air melted, solution treated and precipitation treated, bar a or D ≤ 200 mm — R_m ≥ 930 MPa*

ISO 1132-1, *Rolling bearings — Tolerances — Part 1: Terms and definitions*

ISO 8075, *Aerospace — Surface treatment of hardenable stainless steel parts*

TR 4475, Bearings and mechanical transmissions for airframe applications — Vocabulary[1]

3 Terms, definitions and symbols

For the purposes of this document, the terms and definitions given in TR 4475 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at https://www.iso.org/obp
- IEC Electropedia: available at https://www.electropedia.org/

Symbols of limit deviations are in accordance with definitions of ISO 1132-1.

α = maximum angle of tilt of the inner ring with respect to the outer ring, with the spherical raceway of the outer ring being completely in contact with the inner ring (see Figure 1 and Figure 2);

C_a = permissible static axial load;

C_s = permissible static radial load;

1 Published as ASD STAN Technical Report at the date of publication of this standard by AeroSpace and Defence Industries Association of Europe – Standardization (ASD STAN) (www.asd-stan.org).

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