INTERNATIONAL STANDARD

ISO 14213

First edition
1998-05-15

Aerospace — Airframe ball bearings, single-row, rigid, precision, sealed, torque tube design, extra-light duty — Inch series

Aéronautique et espace — Roulements pour structures d'aéronefs: roulements, rigides, de précision, à une rangée de billes, avec joints d'étanchéité, pour tubes de torsion, série extra-légère — Série en inches

Reference number
ISO 14213:1998(E)

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.

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.

International Standard ISO 14213 was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 15, *Airframe bearings*.

Annex A of this International Standard is for information only.

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Introduction

At the time this International Standard was developed, the Imperial unit sizes of airframe ball bearings were dominant in world application. The basis for this International Standard is the Imperial units provided in annex A. For new applications, the use of metric series airframe ball bearings is encouraged.

Aerospace — Airframe ball bearings, single-row, rigid, precision, sealed, torque tube design, extra-light duty — Inch series

1 Scope

This International Standard specifies the characteristics, boundary dimensions, tolerances, internal clearances and permissible loads of inch series, single-row, sealed, rigid, extra-light duty ball bearings of torque tube design with increased precision and reduced internal clearances used in airframe applications. These bearings are full complement (without cage) with a single row of balls and filling slot. These bearings are designed to withstand only slow rotations and oscillations under load and are intended for use between fixed and moving parts of an aircraft structure and their control surfaces.

The airframe ball bearings covered by this International Standard are designed to operate in the temperature range of – 54 °C to + 150 °C.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 683-17:—[1)], *Heat-treated steels, alloy steels and free-cutting steels — Part 17: Ball and roller bearing steels*.

ISO 1132:1980, *Rolling bearings — Tolerances — Definitions*.

ISO 2082:1986, *Metallic coatings — Electroplated coatings of cadmium on iron or steel*.

ISO 4520:1981, *Chromate conversion coatings on electroplated zinc and cadmium coatings*.

ISO 5593:1997, *Rolling bearings — Vocabulary*.

ISO 8075:1985, *Aerospace — Surface treatment of hardenable stainless steel parts*.

ISO 14190:1998, *Aerospace — Airframe rolling bearings: ball and spherical roller bearings — Technical specification*.

AMS 2417E:1993, *Plating, zinc-nickel alloy*.[2)]

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1) To be published. (Revision of ISO 683-17:1976)

2) Available from: SAE International
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Warrendale, PA 15096-0001
USA