

# TECHNICAL REPORT

**ISO/TR  
10657**

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## Explanatory notes on ISO 76

*Notes explicatives sur l'ISO 76*



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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.

The main task of ISO technical committees is to prepare International Standards. In exceptional circumstances a technical committee may propose the publication of a Technical Report of one of the following types:

- type 1, when the required support cannot be obtained for the publication of an International Standard, despite repeated efforts;
- type 2, when the subject is still under technical development or where for any other reason there is the future but not immediate possibility of an agreement on an International Standard;
- type 3, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example).

Technical Reports of types 1 and 2 are subject to review within three years of publication, to decide whether they can be transformed into International Standards. Technical Reports of type 3 do not necessarily have to be reviewed until the data they provide are considered to be no longer valid or useful.

ISO/TR 10657, which is a Technical Report of type 3, was prepared by Technical Committee ISO/TC 4, *Rolling bearings*, Sub-Committee SC 8, *Load ratings and life*.

ISO/TR 10657 has been prepared for the guidance of users of ISO 76 : 1987, *Rolling bearings — Static load ratings*. It is a purely scientific document intended for use by specialists in this field, and it is not envisaged that it will become an International Standard.

Annexes A, B and C form an integral part of this Technical Report.

## Explanatory notes on ISO 76

### 1 Scope

This Technical Report gives supplementary background information regarding the derivation of formulae and factors given in ISO 76, Rolling bearings - Static load ratings.

### 2 Brief History

#### 2.1 ISO/R 76 - 1958

The ISO Recommendation R 76, Ball and Roller Bearings - Methods of Evaluating Static Load Ratings, was drawn up by Technical Committee ISO/TC 4, Ball and Roller Bearings, the Secretariat of which is held by the Sveriges Standardiseringskommission (SIS).

This Recommendation is based on the studies [1]\*, [2] by A. Palmgren and so on. It is defined in the Recommendation that the basic static load ratings correspond to a total permanent deformation of rolling element and raceway at the most heavily stressed rolling element/raceway contact of 0,0001 of the rolling element diameter. And then the Standard values confined to the basic static load ratings for special inner design rolling bearings are laid down.

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\* Figures in brackets indicate literature references in annex C.