
**Cylindrical gears — Code of inspection
practice —**

Part 2:

Inspection related to radial composite
deviations, runout, tooth thickness and
backlash

*Engrenages cylindriques — Code pratique de réception —
Partie 2: Contrôle relatif aux écarts composés radiaux, au faux-rond,
à l'épaisseur de dent et au jeu entre dents*



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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 technical committees is to prepare International Standards, but 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 Technical Reports of type 3 do not necessarily have to be reviewed until the data they provide are considered to be no longer valid or useful.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 10064-2, which is a Technical Report of type 3, was prepared by Technical Committee ISO/TC 60, *Gears*.

Together with definitions and values allowed for gear element deviations, the International Standard ISO 1328:1975 also provided advice on appropriate inspection methods.

In the course of revising ISO 1328:1975, it was agreed that the description and advice on gear inspection methods should be brought up to date. Because of necessary enlargement and other considerations, the Technical Committee decided that the relevant sections should be published under separate cover as a Technical Report, type 3. It was decided that, together with this Technical Report, a system of documents as listed in clause 2 (References) and annex B (Bibliography) should be established for definitive information.

ISO/TR 10064 consists of the following parts, under the general title *Cylindrical gears — Code of inspection practice*:

- *Part 1: Inspection of corresponding blanks of gear teeth*
- *Part 2: Inspection related to radial composite deviations, runout, tooth thickness and backlash*
- *Part 3: Recommendations relative to blanks, shaft centre distance and parallelism of axes*
- *Part 4: Recommendations relative to surface roughness and tooth contact pattern checking*

Cylindrical gears — Code of inspection practice —

Part 2:

Inspection related to radial composite deviations, runout, tooth thickness and backlash

1 Scope

This part of the Technical Report constitutes a code of practice dealing with inspection relevant to radial composite deviations, runout, tooth thickness and backlash of cylindrical involute gears; i.e., with measurements referred to double flank contact.

In providing advice on gear checking methods and the analysis of measurement results, it supplements the standard ISO 1328-2. Most of the terms used are defined in ISO 1328-2.

Annex A provides a method to select gear tooth thickness tolerances and minimum backlash of a gear mesh. Suggested values for minimum backlash are included.

2 References

- | | |
|-------------------------|---|
| ISO 53: 1974 | Cylindrical gears for general and heavy engineering - Basic rack; |
| ISO 54: 1977 | Cylindrical gears - Modules and diametral pitches of cylindrical gears for general and heavy engineering; |
| ISO 1328-1:1995 | Cylindrical gears - Definitions and allowable values of deviations relevant to corresponding flanks of gear teeth; |
| ISO 1328-2: | Cylindrical gears - Definitions and allowable values of deviations relevant to radial composite deviations and runout information (<i>in the state of preparation</i>); |
| ISO/TR 10064-1:
1992 | Cylindrical gears - Code of inspection practice - Inspection of corresponding flanks of gear teeth; |
| ISO/TR 10064-3: | Cylindrical gears - Recommendations relative to blanks, shaft center distance and parallelism of axes (<i>in the state of preparation</i>). |