



BSI Standards Publication

Code of inspection practice

Part 1: Measurement of cylindrical gear tooth flanks

National foreword

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Code of inspection practice —

Part 1:

**Measurement of cylindrical gear
tooth flanks**

Code pratique de réception —

Partie 1: Mesure des flancs de dents cylindriques



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Contents

	Page
Foreword	vi
1 Scope	1
2 Normative references	1
3 Terms, definitions, symbols and abbreviated terms	1
3.1 Terms and definitions.....	1
3.2 Symbols and abbreviated terms.....	1
4 General considerations	5
4.1 Background.....	5
4.2 Required inspection information.....	5
4.3 Measurement selection.....	5
4.3.1 Substitution of measurement methods.....	5
4.3.2 First piece inspection.....	6
4.3.3 Sampling and statistical process control.....	6
5 Conventions and measurement positions	6
5.1 General.....	6
5.2 Datum axis.....	6
5.3 Left or right flank.....	6
5.4 Left hand or right hand helical gears.....	7
5.5 Numbering of teeth and flanks.....	8
5.6 Numbering of pitches.....	8
5.7 Number of pitches “ <i>k</i> ” in a deviation symbol subscript.....	8
6 Types of measuring equipment and principle	8
6.1 General.....	8
6.2 Measurement methods.....	14
6.2.1 Generative measurement methods.....	14
6.2.2 Non-generative measurement methods.....	16
6.2.3 Pitch measurement methods.....	17
6.2.4 Hand-held pitch measuring devices.....	18
6.2.5 Radial runout measurement.....	20
6.2.6 Computer tomography methods for small gears.....	20
6.2.7 Optical devices for small spur gears.....	21
6.3 Calibration of equipment.....	21
6.4 Tooth thickness differences between CNC/CMM and manual measurement.....	21
6.5 “In-process” gear measurement on manufacturing machines.....	22
6.6 Gear mounting.....	23
6.7 Example output format from a CNC GMM.....	23
6.7.1 General.....	23
6.7.2 Example evaluations of modified helices and profiles.....	26
7 Recommended measurement procedure and good measurement practice	27
7.1 Measurement procedure.....	27
7.2 Probe problems when measuring aluminium parts.....	29
7.3 Suitable artefacts for calibration of measuring machines.....	29
8 Inspection procedures for gears that are too large for gear inspection machines	30
8.1 General.....	30
8.2 Profile inspection using portable device.....	30
8.2.1 Disassembly of segments.....	30
8.2.2 Measurement by portable gear inspection device using coordinates.....	30
8.2.3 Profile inspection by gear tooth caliper.....	31
8.3 Inspection of helix form deviation.....	35
8.3.1 Inspection of helix form deviation on the gear cutting machine.....	35
8.3.2 Straightness inspection using a cylinder.....	36
8.3.3 Inspection of the tooth contact pattern.....	36

8.4	Inspection of the pitch	37
8.4.1	Calculation of pitch	37
8.4.2	Inspection using an automatic device on the cutting machine: inspection of the single circular pitch and the cumulative pitch deviation	37
8.4.3	Manual inspection: inspection of base pitch, p_b , and base pitch deviations, f_{pb}	38
8.5	Measuring tooth thickness	38
8.6	Measuring gear radial runout and axial runout of reference surfaces	38
9	Measurement analysis — Profile, helix, pitch and radial runout	38
9.1	Profile	38
9.1.1	Profile deviation	38
9.1.2	Profile deviation diagram	39
9.1.3	Evaluation of profile diagrams	40
9.1.4	Algebraic signs of $f_{H\alpha}$, f_b and f_α	41
9.1.5	Mean profile slope deviation, $f_{H\alpha m}$	41
9.2	Helix	42
9.2.1	General	42
9.2.2	Helix deviation diagram	43
9.2.3	Evaluation of helix diagrams	44
9.2.4	Algebraic signs of $f_{H\beta}$ and f_β	45
9.2.5	Machine corrections based on mean helix slope deviation, $f_{H\beta m}$	46
9.3	Pitch	47
9.3.1	Pitch deviation	47
9.3.2	Pitch deviation measurement	47
9.3.3	Relationships of pitch parameters and measuring methods	47
9.3.4	Calculation of cumulative pitch (index), F_p	48
9.3.5	Calculation of single pitch deviation, f_p	49
9.3.6	Calculation of total cumulative pitch deviation, F_p	49
9.3.7	Calculation of sector pitch deviation, F_{pl}	49
9.3.8	Segment gear measurement	49
9.4	Radial runout, determining eccentricity	50
9.4.1	Measuring principle	50
9.4.2	Evaluation of measurement	50
10	Interpretation of profile, helix, pitch and radial runout results	51
10.1	Interpreting measurement results	51
10.2	Procedure for interpreting measurement results	51
10.3	Recognition of common manufacturing errors	52
10.3.1	General	52
10.3.2	Example of a profile with pressure angle deviation	52
10.3.3	Example of profile deviations with varying pressure angle deviation	52
10.3.4	Hob runout or shaping cutter deflection	53
10.3.5	Consistent mean helix slope deviation	54
10.3.6	Helix slope variation	54
10.3.7	Profile control diameter not achieved	55
10.3.8	Variation in profile non-clean up and profile control diameter not achieved	55
10.3.9	Pitch results with radial runout of the gear blank	57
10.3.10	Pitch with indexing deviations	57
10.3.11	Pitch with repeating deviation patterns that may cause noise	60
11	Single flank composite testing	60
11.1	Single flank composite testing principle	60
11.2	Single flank composite test	61
11.2.1	Single flank test setup	61
11.2.2	Single flank composite deviations	63
11.3	Single flank measurement with master gear	64
11.3.1	Master gear requirements	64
11.3.2	Influence of profile deviations	64
11.3.3	Influence of pitch deviations	65
11.3.4	Influence of helix deviations	65

11.4	Single flank measurement of product gear pair.....	68
11.4.1	Differences between tests with a master gear and between two product gears.....	68
11.4.2	Identification and location of defects.....	68
11.4.3	Selective meshing of gears.....	68
11.5	Data analysis by the Fourier transform method.....	69
12	Additional measurements.....	70
12.1	Flank measurements.....	70
12.1.1	General.....	70
12.1.2	Twist measurement.....	70
12.1.3	Topographical measurement.....	72
12.1.4	Undulations.....	72
12.2	Surface roughness measurement.....	73
12.3	Tooth root fillet radius measurement.....	73
13	Filters and data density.....	74
13.1	General.....	74
13.2	Examples of filtered results.....	74
13.3	Working principle of the Gauss 50 % filter.....	75
13.4	Filter limitations.....	80
14	Additional calculations.....	80
14.1	Calculation of single pitch deviation, f_{pv} from normal base pitch measurements.....	80
14.2	Additional calculations for normal base pitch measurements.....	81
14.2.1	Included parameters.....	81
14.2.2	Calculation of normal base pitch deviation, f_{pbn}	81
14.2.3	Calculation of mean normal base pitch deviation, f_{pbnm}	81
14.3	Additional calculations for profile measurements.....	81
14.3.1	Included parameters.....	81
14.3.2	Mean base diameter deviation and mean pressure angle deviation.....	82
14.3.3	Calculation of effective base diameter, $d_{b\text{eff}}$	83
14.3.4	Calculation of effective transverse pressure angle, $\alpha_{t\text{eff}}$	83
14.3.5	Calculation of effective normal pressure angle, $\alpha_{n\text{eff}}$	83
14.3.6	Calculation of mean transverse pressure angle deviation, $f_{\alpha mt}$	84
14.3.7	Calculation of mean normal pressure angle deviation, $f_{\alpha mn}$	84
14.4	Additional calculations for helix measurements.....	84
14.4.1	Included parameters.....	84
14.4.2	Required preliminary data.....	85
14.4.3	Calculation of effective helix angle at the measurement diameter, $\beta_{M\text{eff}}$	85
14.4.4	Calculation of effective lead, $p_{z\text{eff}}$	86
14.4.5	Calculation of effective helix angle at the reference diameter, β_{eff}	86
14.4.6	Calculation of mean lead deviation, f_{pzm}	86
14.4.7	Calculation of mean helix angle deviation, $f_{\beta m}$	86
	Bibliography.....	88

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 procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by ISO/TC 60, *Gears*.

This third edition cancels and replaces the second edition (ISO/TR 10064-1:2017), of which it constitutes a minor revision.

In addition to minor editorial corrections and clarifications, the changes compared to the previous edition are as follows:

- consistently referring to the “reference diameter” and eliminating references to the outdated term “standard pitch diameter”;
- clarifying what “adjacent pitch deviations” are in [6.2.3.3](#);
- in [9.1.1](#), clarifying that what is specified is the design profile;
- in [9.2.1](#), clarifying that what is specified is the design helix;
- adding chamfers to the list of things in [9.2.2](#) that can be detected on a helix deviation chart;
- in [Figures 44](#) and [55](#) adding that the grinding fillet is produced by the finishing tool while the root is created by the pre-finishing tool;
- a factor of 10^{-3} was added to [Formula \(43\)](#) to account for the specified units.

A list of all parts in the ISO/TR 10064 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Code of inspection practice —

Part 1:

Measurement of cylindrical gear tooth flanks

1 Scope

This document supplements ISO 1328-1:2013. It provides a code of practice dealing with measurements on flanks of individual cylindrical involute gears, i.e. with the measurement of pitch, profile, helix and tangential composite characteristics. It describes measuring equipment, provides advice for gear measuring methods and for the analysis of measurement results, and discusses the interpretation of results.

Measurements using a double flank tester are not included (see ISO/TR 10064-2). This document only applies to involute gears.

2 Normative references

There are no normative references in this document.

3 Terms, definitions, symbols and abbreviated terms

3.1 Terms and definitions

No terms and definitions are listed in this document.

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 <http://www.electropedia.org/>

3.2 Symbols and abbreviated terms

For the purposes of this document, the following symbols and abbreviated terms apply.

NOTE The symbols and terms used throughout this document are in basic agreement with the symbols and terms given in ISO 701 and in ISO 1122-1. In all cases, the first time that each symbol is introduced, it is defined and discussed in detail. See [Table 1](#). Abbreviated terms are given in [Table 2](#).

Table 1 — Symbols and definitions

Symbols ^a	Definition	Units	First use
a	tip point	—	Figure 31
b	face width	mm	Figure 37
^a Symbols used for deviations of individual element measurements from specified values are composed of lower case letters “ f ” with subscripts (exceptions include f_e , f_1 and f_2) whereas symbols used for “cumulative” or “total” deviations, which represent combinations of several individual element deviations, are composed of capital letters “ F ” also with subscripts. It is necessary to qualify some deviations with an algebraic sign. A deviation is positive when, for example, a dimension is larger than optimum and negative when smaller than optimum.			
^b These deviations can be + (plus) or – (minus).			