American
Gear Manufacturers
Association

AGMA 915-2-B20
(Revision of 915-2-A05)

AGMA Information Sheet

Inspection Practices – Part 2: Double Flank Radial Composite Measurements

AGMA 915-2-B20

American Gear Manufacturers Association

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[Tables or other self-supporting sections may be referenced. Citations should read: See AGMA 915-2-B20, *Inspection Practices – Part 2: Double Flank Radial Composite Measurements*, published by the American Gear Manufacturers Association, 1001 N. Fairfax Street, Suite 500, Alexandria, Virginia 22314, http://www.agma.org.]

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ABSTRACT

This information sheet discusses inspection of cylindrical involute gears using the radial (double flank) composite method, with recommended practices detailed. This information sheet is a supplement to the standard ANSI/AGMA 2015-2.

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Foreword

[The foreword, footnotes and annexes, if any, in this document are provided for informational purposes only and are not to be construed as a part of AGMA 915-2-B20, *Inspection Practices – Part 2: Double Flank Radial Composite Measurements.*]

AGMA 915-2-A05 replaced AGMA ISO 10064-2, *Cylindrical Gears – Code of Inspection Practice – Part 2: Inspection Related to Radial Composite Deviations, Runout, Tooth Thickness and Backlash*, and the information on similar subjects as covered in AGMA 2000-A88, *Gear Classification and Inspection Handbook – Tolerances and Measuring Methods for Unassembled Spur and Helical Gears*.

The first draft of AGMA 915-2-A06 was made in March 1999. It was approved by the Technical Division Executive Committee (TDEC) in May 2005.

The AGMA 915-2-B20 revision replaces AGMA 915-2-A05 and was approved by the Technical Division Executive Committee (TDEC) on November 26, 2019. The main changes in this new revision include:

- Change of title;
    - OLD - Inspection Practices - Part 2: Cylindrical Gears - Radial Measurements;
    - NEW - Inspection Practices – Part 2: Double Flank Radial Composite Measurements;
- Addition of other types of gears including bevel gears;
- Information on the measurement of double flank runout, eccentricity, functional tooth thickness and higher order Fourier Analysis;
- Design of suitable master gears, statistical measurement techniques related to the use of double flank testers, gage repeatability and reproducibility and uncertainty analysis.

Suggestions for improvement of this information sheet will be welcome. They should be sent to tech@agma.org.

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American Gear Manufacturers Association –

Inspection Practices – Part 2: Double Flank Radial Composite Measurements

1 Scope

This information sheet constitutes a code of practice dealing with inspection relevant to radial composite deviations of gears when measurements are made by using a master gear in double flank contact.

In providing advice on gear checking methods and the analysis of measurement results, it supplements standard ANSI/AGMA 2015-2.

NOTE: Measurements by using a master gear in single flank contact are not covered by this information sheet. See ANSI/AGMA/ISO 1328-1 [1] and ISO/TR 10064-1 [2], for more information on single flank testing.

2 Normative References

The following documents contain provisions which, through reference in this text, constitute provisions of this information sheet. At the time of publication, the editions indicated were valid. All publications are subject to revision. Users of this information sheet are encouraged to investigate the possibility of applying the most recent editions of the publications listed. Each document is crossed referenced in the body of this information sheet to indicate how it applies.

ANSI/AGMA 2015-2-B15, *Accuracy Classification System – Radial Measurements for Cylindrical Gears*

ANSI/AGMA 1012-G05, *Gear Nomenclature, Definition of Terms with Symbols*

ANSI/AGMA 2002-D19, *Tooth Thickness and Backlash Measurement of Cylindrical Involute Gearing*

3 Symbols and terminology

3.1 Symbols

The symbols used in this standard are as shown in Table 1.

NOTE: The symbols and terms contained in this information sheet may vary from those used in other AGMA and ISO standards. Users of this information sheet should assure themselves that they are using these symbols and terms in the manner indicated herein.

The terms used, wherever applicable, conform to ANSI/AGMA 1012, *Gear Nomenclature, Definitions of Terms with Symbols.*

