

Indian Standard

BONDED ABRASIVE PRODUCTS — PERMISSIBLE UNBALANCE OF GRINDING WHEELS AS DELIVERED — STATIC TESTING (First Revision)

1 Scope

This International Standard specifies the maximum permissible values of unbalances for various grinding wheels of ISO 603-1 to ISO 603-9 and ISO 603-12 to ISO 603-16 in the as-delivered condition, with an outside diameter $D \leq 115$ mm and maximum operating speed $v_s \leq 16$ m/s.

It also specifies the method for measuring the unbalance and the practical method for testing whether a grinding wheel is acceptable or not.

This International Standard is applicable to bonded abrasive grinding wheels in the as-delivered condition.

This International Standard is not applicable to



diamond, cubic boron nitride or natural stone grinding wheels, or to



centreless control wheels, lapping and disc wheels, ball wheels or glass grinding wheels.

NOTE 1 The values given refer to the grinding wheel itself, independent of any unbalance which may exist in the balancing arbor or in the means of fastening it to this arbor. These various elements, together with the flanges or hub-flanges, are assumed to be balanced, homogeneous and free from geometrical defects.

NOTE 2 The effects of unbalance are basically



additional stresses on the arbor, the machine and its mounting,



excessive wear of the bearings,



vibration prejudicial to the quality of machining and increased internal stresses in the grinding wheel, and



increased operator fatigue.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 603-1, *Bonded abrasive products — Dimensions — Part 1: Grinding wheels for external cylindrical grinding between centres*

ISO 603-2, *Bonded abrasive products — Dimensions — Part 2: Grinding wheels for centreless external cylindrical grinding*

ISO 603-3, *Bonded abrasive products — Dimensions — Part 3: Grinding wheels for internal cylindrical grinding*