

Plain bearings — Measurement of wall thickness of thin-walled half-bearings and thin-walled bushes

Committees responsible for this British Standard

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- Association of Bronze and Brass Founders
- British Plastics Federation
- British Powder Metal Federation
- Copper Development Association
- Institution of Diesel and Gas Turbine Engineers
- Institution of Mechanical Engineers
- Society of Motor Manufacturers and Traders Ltd.

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National foreword

This British Standard has been prepared under the direction of the Machinery and Components Standards Policy Committee and is identical with ISO 12306:1994 *Plain bearings — Measurement of wall thickness of thin-walled half-bearings and thin-walled bushes*, published by the International Organization for Standardization (ISO).

Cross-references

International Standard	Corresponding British Standard
ISO 3547:1976	BS 4480 <i>Plain bearings — metric series</i> Part 4:1979 <i>Dimensions, tolerances and methods of checking wrapped bushes</i> (Identical)
ISO 3548:1978	Part 5:1979 <i>Dimensions, tolerances and methods of checking thin-walled half bearings</i> (Identical)
ISO 4379:1993	Part 3:1993 <i>Copper alloy bushes</i> (Identical)
ISO 6864:1984	Part 8:1984 <i>Specification for dimensions, tolerances and methods of checking of thin-walled flanged half bearings</i> (Identical)
ISO 12301:1992	BS 7679:1993 <i>Plain bearings. Quality control techniques and inspection of geometrical and material quality characteristics</i> (Identical)

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 8, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope

This International Standard describes in accordance with ISO 12301 the checking methods and measuring equipment used for measuring the total wall thickness of thin-walled half-bearings and thin-walled bushes in the finished state.

It is not applicable to thermoplastic bushes.

NOTE 1 All dimensions in this International Standard are given in millimetres.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 3547:1976, *Plain bearings — Wrapped bushes — Dimensions, tolerances and methods of checking*.

ISO 3548:1978, *Plain bearings — Thin-walled half bearings — Dimensions, tolerances and methods of checking*.

ISO 4379:1993, *Plain bearings — Copper alloy bushes*.

ISO 6864:1984, *Plain bearings — Thin-walled flanged half bearings — Dimensions, tolerances and methods of checking*.

ISO 12301:1992, *Plain bearings — Quality control techniques and inspection of geometrical and material quality characteristics*.

3 Definition

For the purposes of this International Standard, the following definition applies.

3.1

total wall thickness, s_{tot}

radial distance between the opposing measuring points at the inside and the outside surface diameter (See Figure 1.)

4 Symbols and units

For the purposes of this International Standard, the symbols and units are as given in Table 1.

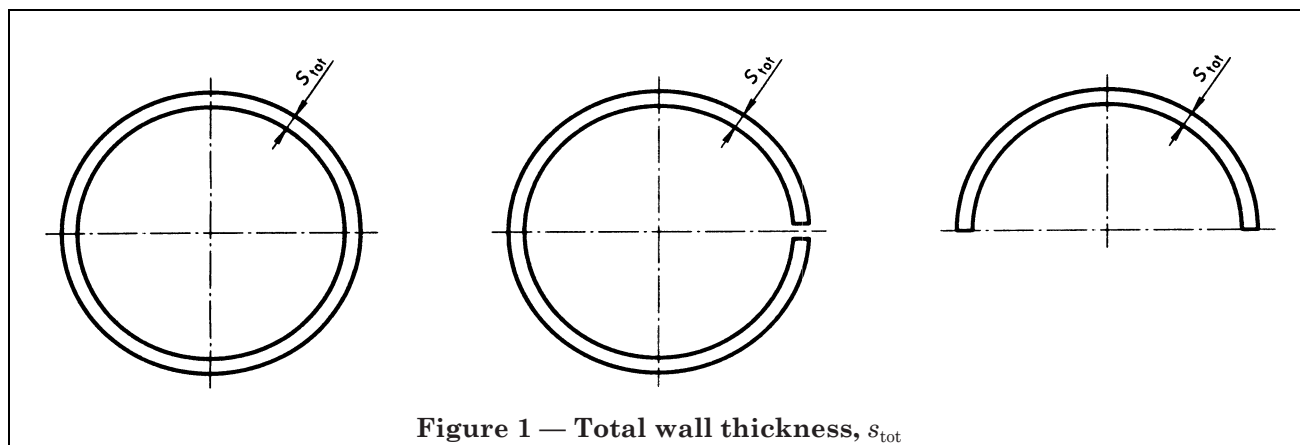


Figure 1 — Total wall thickness, s_{tot}

Table 1 — Symbols and units

Symbol	Parameter	SI unit
a_c	Measuring distance	mm
B	Width	mm
D_o	Outside diameter	mm
F_{pin}	Checking load (measuring pin)	N
n	Number of test pieces	
s_{tot}	Total wall thickness	mm
u	Uncertainty of measurement (confidence level of 95 %)	mm
u_E	Uncertainty of measurement of measuring equipment	mm
Δx	Difference in measured values between first and second readings	mm
$\bar{\Delta x}$	Arithmetic mean of Δx	mm
σ	Standard deviation	mm
$\sigma_{\Delta x}$	Standard deviation of Δx	mm