

Specification for

Gear hobs —

Part 2: Hobs for gears for turbine reduction and similar drives

Co-operating organizations

The Mechanical Engineering Industry Standards Committee, under whose supervision this British Standard was prepared, consists of representatives from the following Government departments and scientific and industrial organizations:

Admiralty*	Gas Council
Air Ministry	High Commission of India
Associated Offices' Technical Committee	Institute of Marine Engineers
Association of Consulting Engineers (Incorporated)	Institute of Petroleum
British Chemical Plant Manufacturers' Association	Institution of Civil Engineers
British Compressed Air Society	Institution of Gas Engineers
British Electrical and Allied Manufacturers' Association*	Institution of Heating and Ventilating Engineers
British Engineers' Association	Institution of Mechanical Engineers
British Gear Manufacturers' Association*	Institution of Mechanical Engineers (Automobile Division)
British Internal Combustion Engine Manufacturers' Association	Institution of Production Engineers*
British Iron and Steel Federation	Locomotive and Allied Manufacturers' Association of Great Britain
British Railways, The British Transport Commission	Machine Tool Trades Association*
Crown Agents for Oversea Governments and Administrations	Ministry of Labour (Factory Inspectorate)
D.S.I.R. — National Engineering Laboratory*	Ministry of Power
Electricity Council the Generating Board and the Area Boards in England and Wales	Ministry of Transport
Engineering Equipment Users' Association	Ministry of Works
	National Coal Board
	National Physical Laboratory (D.S.I.R.)
	Radio Industry Council
	War Office

The Government departments and scientific and industrial organizations marked with an asterisk in the above list, together with the following, were directly represented on the Committee entrusted with the preparation of this standard:

Board of Trade	Parsons and Marine Engineering Turbine
Milling Cutter and Reamer Association	Research and Development Association
North East Coast Institution of Engineers and Shipbuilders	Society of Motor Manufacturers and Traders
	Manufacturers of gear hobs

This British Standard, having been approved by the Mechanical Engineering Industry Standards Committee and endorsed by the Chairman of the Engineering Divisional Council, was published under the authority of the General Council on 23 December 1960

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Foreword

This standard makes reference to the following British Standards:

BS 1807, *Gears for turbines and similar drives — Part 2: Tooth forms and pitches.*

BS 2062, *Gear hobs — Part 1: Hobs for general purposes 1 d.p. to 20 d.p. inclusive.*

BS 2519, *Glossary of terms and notation for toothed gearing.*

This revision of the 1953 edition has been carried out under the authority of the Mechanical Engineering Industry Standards Committee in order to bring it into up-to-date relation with BS 1807, “*Gears for turbines and similar drives*”.

The permissible errors given in this edition are very similar to those given in the previous edition, but the layout of the table has been improved to make it comparable with that in BS 2062-1:1959, “*Hobs for general purposes 1 d.p. to 20 d.p. inclusive*”.

It has not been possible to achieve complete agreement on the dimensions of hobs but recommended dimensions are given in Appendix A and Appendix B for the tooth forms and pitches listed in BS 1807-2. The dimensions given are suitable for hobs used on the machines generally employed in turbine gear manufacture.

It has been agreed to continue the use of the designation Grade AA for this class of hobs as the usage has become well established and any alteration would give rise to confusion.

A table of approximate metric equivalents is given in Appendix G. More precise conversions should be based on the tables in BS 350, “*Conversion factors and tables*”.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 10 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

Part 2 of this British Standard applies to Grade AA ground profile single-start right-hand and left-hand finishing hobs for gears for marine turbine, land turbine and similar drives. It covers the accuracy requirements of hobs for the production of gears complying with BS 1807, "*Gears for turbines and similar drives*", Part 1, "*Accuracy*" and recommends basic dimensions for hobs with the tooth forms and pitches given in BS 1807-2, "*Tooth forms and pitches*".

2 Terms and notation

The general terms used common to gears and hobs are taken from BS 2519, "*Glossary of terms and notation for toothed gearing*".

Figure 1 illustrates the terms used.

3 Dimensions

Recommended basic dimensions for hobs for the production of the tooth forms and pitches given in BS 1807-2, "*Tooth forms and pitches*", are given in Appendix A and Appendix B.

4 Gashes

All hobs shall be gashed so that the cutting faces are normal to the tooth helix at the datum diameters.

5 Keys and keyways

Recommended dimensions and tolerances are given in Appendix F.

The error of axial alignment of the keyway shall be such that interference does not occur between the key and keyway at any point throughout the hob length when the keyway is within the limits of width at all points.

6 Permissible errors

The errors shall not exceed those given in Table 1.

7 Marking

A recommended system of marking is given in Appendix C.

8 Ordering instructions

Recommendations on the instructions to be given in an order are shown in Appendix D.

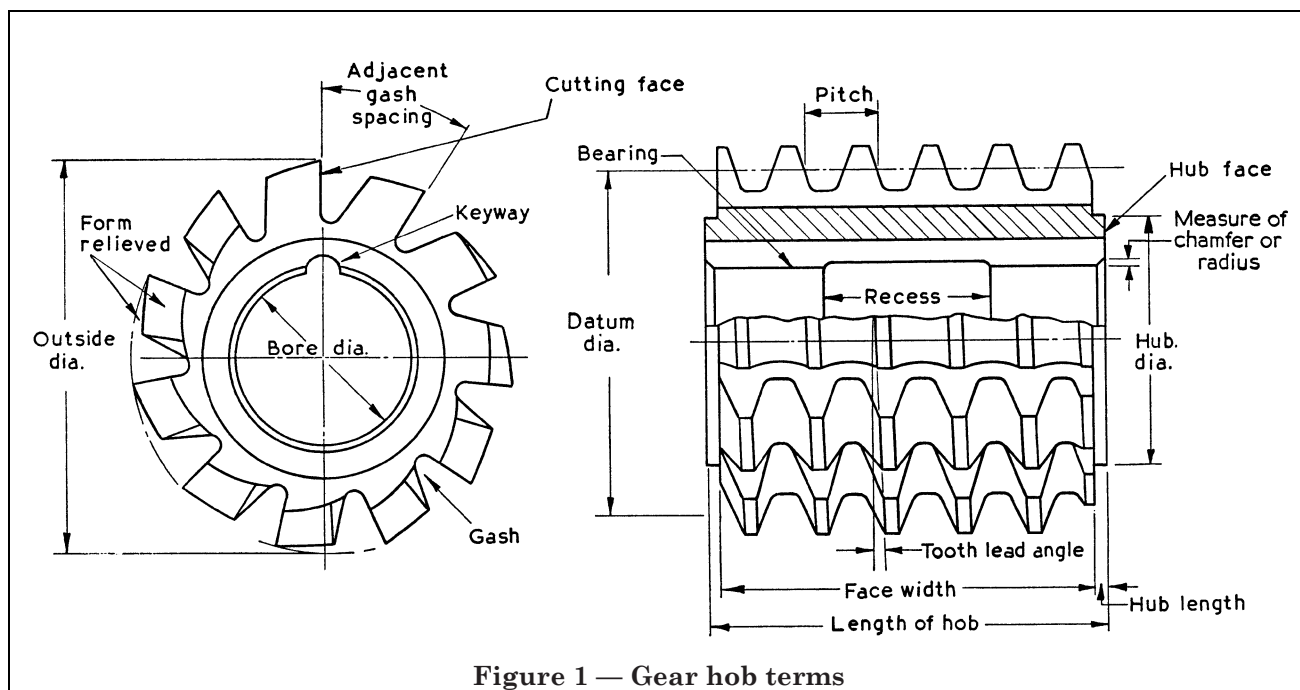


Figure 1 — Gear hob terms