

OBSOLESCENT
JANUARY 1976

Specification for

Screwed studs —

Part 1: General purpose studs

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Bright Bolt & Nut Manufacturers Association	General Post Office
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British Bolt, Nut, Screw and Rivet Federation	Metal Thread Screw Manufacturers Association (Rolled Screw Section)
British Constructional Steelwork Association	Metal Thread Screw Manufacturers Association (Turned Screw Section)
British Cycle and Motor Cycle Manufacturers' and Traders' Union Ltd.	Society of British Aircraft Constructors
British Steel Wire Industries Association	Society of Motor Manufacturers and Traders Ltd.
Cold Headed Heat-treated Bolt Association	Washer Manufacturers Association
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Foreword

This standard makes reference to the following British Standards:—

BS 84, *Screw threads of Whitworth form.*

BS 93, *B.A. screw threads.*

BS 1580, *Unified screw threads.*

General dimensions for screwed studs were previously given in BS 1083; when this standard was revised in 1951 it was felt that the data for studs were inadequate and that information relating to the threads was also needed. Studs were accordingly omitted from the revision of BS 1083 and it was agreed that they should be the subject of a separate standard.

It was of course realized that one standard for studs already existed, namely BS 1171, "*High duty studs and tapped holes in light alloys*". This was published in 1944 as a War Emergency Standard and was intended to apply to a restricted range of studs used for high duty purposes in aero-engine work where the studs are to be inserted in light alloys. In view of its specialized application it was not considered to afford a suitable basis for a standard for general purpose studs, nor was it felt necessary to adhere to the principle of the standard stud and undersize hole specified in BS 1171 if it appeared that an oversize stud mated with a standard tapped hole was to be preferred for general use.

The committee responsible for the preparation of the present standard found that the difficulties were fully as great as had been envisaged. Their aim was to provide for a stud having tolerances which would not render it expensive to manufacture and which could be used in association with standard tapped holes for most purposes.

The most urgent need was to provide for studs with Unified threads and attention was accordingly concentrated on these, since the principle, if found to be satisfactory, could equally well be applied to Whitworth and B.A. threads.

Some difficulty was found in arriving at an appropriate amount of oversize which would not result in the risk of too heavy an interference on the smaller sizes. It was thought that the values which were finally adopted would in general provide a satisfactory fit; even where interference was not present, locking would take place on the run-out threads and this feature was accordingly closely controlled.

A draft was widely circulated to industry for comment and the comments received suggested that there were irreconcilable differences in stud practice which made it virtually impossible to specify one grade of stud to suit the requirements of the many different types of users. At one end of the scale there were users who felt that true interference fits were essential for their purpose and at the other were those who considered that the recommended Class 3 tapping was too close.

After very full discussion the committee agreed that the most satisfactory solution would be to introduce another grade of stud. By this means, those who required general purpose studs could obtain a satisfactory product at an economic price, while those with more special requirements could also refer to a standard for guidance instead of having to make their own drawings.

Tolerances for the higher grade are still under discussion; in order, however, to make available the general information relating to overall dimensions, length of thread etc., it has been decided to publish the standard in two parts. Part One relates to the features mentioned above and specifies the limits and tolerances of threads for general purpose studs. Part Two, which it is hoped will follow shortly, will contain limits and tolerances of threads for studs of the higher grade.

In accordance with BSI policy concerning the introduction of metric standards, this imperial standard has been declared obsolescent. It will be made obsolete in due course.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, 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.