

# Mechanical properties of fasteners —

## Part 3: Specification for set screws and similar threaded fasteners not under tensile stresses

UDC 621.882:620.17 + 620.882.2:620.17

## Cooperating organizations

The Mechanical Engineering Standards Committee, under whose direction this British Standard was prepared, consists of representatives from the following:

|                                                                   |                                                                     |
|-------------------------------------------------------------------|---------------------------------------------------------------------|
| Associated Offices Technical Committee                            | Department of the Environment (PSA)                                 |
| Association of Consulting Engineers                               | Department of Trade (Marine Division)                               |
| Association of Hydraulic Equipment Manufacturers                  | Department of Transport                                             |
| Association of Mining, Electrical and Mechanical Engineers        | Electricity Supply Industry in England and Wales                    |
| British Compressed Air Society                                    | Engineering Equipment Users' Association                            |
| British Electrical and Allied Manufacturers' Association (BEAMA)* | Federation of Manufacturers of Construction Equipment and Cranes    |
| British Gas Corporation                                           | Health and Safety Executive                                         |
| British Gear Manufacturers' Association                           | Institution of Gas Engineers                                        |
| British Internal Combustion Engine Manufacturers' Association*    | Institution of Mechanical Engineers                                 |
| British Pump Manufacturers' Association                           | Institution of Plant Engineers                                      |
| British Steel Corporation                                         | Institution of Production Engineers*                                |
| British Steel Industry*                                           | Lloyd's Register of Shipping                                        |
| Cbmpe                                                             | London Transport Executive                                          |
| Chartered Institution of Building Services                        | Machine Tool Industry Research Association                          |
| Crown Agents for Oversea Governments and Administrations          | Ministry of Defence*                                                |
| Department of Industry (Mechanical Engineering)                   | National Coal Board*                                                |
| Department of Industry (National Engineering Laboratory)*         | Oil companies Materials Association                                 |
|                                                                   | Process Plant Association                                           |
|                                                                   | Society of Motor Manufacturers and Traders Limited*                 |
|                                                                   | Telecommunication Engineering and Manufacturing Association (TEMA)* |

The organizations marked with an asterisk in the above list, together with the following, were directly represented on the Technical Committee entrusted with the preparation of this British Standard:

|                                              |                                                    |
|----------------------------------------------|----------------------------------------------------|
| British Constructional Steelwork Association | Federation of British Hand Tool Manufacturers      |
| British Industrial Fasteners Federation      | Gauge and Tool Makers' Association                 |
| British Railways Board                       | Washer Manufacturers' Association of Great Britain |
| British Steel Industry (Wire Section)        |                                                    |
| Electronic Engineering Association           |                                                    |

This British Standard, having been prepared under the direction of the Mechanical Engineering Standards Committee, was published under the authority of the Executive Board and comes into effect on 30 April 1981

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# National foreword

This British Standard has been prepared under the direction of the Mechanical Engineering Standards Committee. This Part of the standard is identical with ISO 898-5:1980 “*Mechanical properties of fasteners — Part 5: Set screws and similar threaded fasteners not under tensile stresses*”. The United Kingdom has taken an active part in the work of Technical Committee ISO/TC 2, Fasteners, of the International Organization for Standardization (ISO).

The other Parts of this standard are as follows:

- *Part 1: “Specification for screws and studs”;*
- *Part 2: “Specification for nuts with specified proof load values”.*

**Terminology and conventions.** The text of the international standard has been approved as suitable for publication as a British Standard without deviation. Some terminology and certain conventions are not identical with those used in British Standards; attention is especially drawn to the following.

The comma has been used throughout as a decimal marker. In British Standards it is current practice to use a full point on the baseline as the decimal marker.

Where the words “International Standard” appear, referring to this standard, they should be read as “British Standard”.

**Cross-references**

| International standard | Corresponding British Standard                                                                                      |
|------------------------|---------------------------------------------------------------------------------------------------------------------|
| ISO/R 80:1968          | BS 891 <i>Method for Rockwell hardness test</i><br>Part 1:1962 <i>Testing of metals</i><br>(Technically equivalent) |
| ISO/R 81:1967          | BS 427 <i>Method for Vickers hardness test</i><br>Part 1:1961 <i>Testing of metals</i><br>(Technically equivalent)  |

The Technical Committee has reviewed the provisions of ISO/R 79:1968 referred to in the text, and has decided that they are acceptable for use in conjunction with this standard.

The British Standard related to ISO/R 79 is BS 240-1:1962.

ISO 6157-1, at present at the stage of draft, will be implemented as a British Standard in due course.

**Additional information.** The “set screws” referred to in this standard are generally known in the United Kingdom as “grub screws”.

Attention is drawn to the limitation of use in that screws complying with the requirements of this specification are intended for use under conditions that induce compressive stresses only: they should not be used with locknuts or other means that induce tensile stresses.

*Omission of captions to figures.* In the International Standard, the captions to Figure 1 and Figure 2 have been omitted. For the sake of clarity, the following are appropriate:

- Figure 1 — Zones of decarburization
- Figure 2 — Hardness measurements for decarburization tests.

The Technical Committee responsible for this British Standard has proposed to the ISO committee that these captions should be included in the international standard.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

**Compliance with a British Standard does not of itself confer immunity from legal obligations.**

#### **Summary of pages**

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 6, 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.