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**Specification for  
Steel pipe fittings,  
screwed and socket-welding  
for the petroleum industry**

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**British Standards Institution**

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The following BSI references relate to the work on this standard:  
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The Petroleum Equipment Industry Standards Committee, under whose supervision this British Standard was prepared, consists of representatives from the following Government department and scientific and industrial organizations:

British Gas Corporation	*Council of British Manufacturers of Petroleum Equipment
British Mechanical Engineering Confederation	Department of Trade and Industry, Oil
British Rubber Manufacturers' Association Ltd	*Oil Companies Materials Association
*British Steel Industry	

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British Chemical Engineering Contractors' Association	Confederation of British Industry
British Steel Corporation	Engineering Equipment Users' Association
British Valve Manufacturers' Association	National Association of Drop Forgers and Stampers

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## Foreword

This British Standard has been prepared under the authority of the Petroleum Equipment Industry Standards Committee.

It is the metric version of BS 3799 which has also been revised so as to include welding bosses and round and swaged nipples, for which there is a general requirement. Flush bushings, bull plugs and all 2000 lb fittings have been deleted as there is now negligible usage of these types. Non-preferred sizes of all items, and hexagonal nipples over 2 in. nominal size have also been omitted.

A wider range of materials has been introduced and the material references have been revised in line with the current materials standards.

The bore diameter of sockets has also been modified to enable pipe with dimensions in accordance with ISO/R 64 (BS 3600) to be used in addition to pipe with the dimensions given in BS 1600 (API).

Certain measurements, notably nominal sizes, have not been converted into metric units since the use of imperial units in such cases follows established international practice in the petroleum industry; for this reason and also to retain identification, the designations 3000 lb and 6000 lb have been maintained.

In order to ensure interchangeability requirements, ANSI B16.11, ASTM 234 and ASTM A403 have been taken into account in the preparation of this document.

Acknowledgment is made to the American National Standards Institute (ANSI), the American Society for Testing Materials (ASTM), and the American Petroleum Institute (API) for data used in this standard.

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British Standard Specification for

# Steel pipe fittings, screwed and socket-welding for the petroleum industry

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## 1. General

### 1.1 Scope

This British Standard specifies requirements for forged carbon and alloy steel screwed and socket-welding fittings for use in the petroleum and petrochemical industry.

Screwed fittings specified in this standard are intended for assembly with pipe threaded in accordance with API Std. 5B or ANSI B2.1. (N.P.T.)

Socket-welding fittings specified in this standard are primarily intended for assembly with plain end pipe dimensioned in accordance with BS 1600 and API Std. 5L. It should be noted, however, that with the exception of nominal size  $2\frac{1}{2}$  in (65 mm) the socket dimensions are also suitable for use with plain end pipe dimensions in accordance with BS 3600 (ISO/R 64). See Notes to Purchaser (Appendix A) and Tables 13 and 16.

This standard provides for the following:

(1) Screwed fittings:

- Elbows, 90° and 45°
- Crosses
- Tees
- Couplings and half-couplings
- Caps
- Square, hexagonal and round head plugs
- Hexagonal head bushings
- Hexagonal and round nipples
- Unions
- Welding bosses
- Swage nipples\*

(2) Socket-welding fittings:

- Elbows, 90° and 45°
- Crosses
- Tees
- Couplings and half-couplings
- Caps
- Unions
- Welding bosses
- Swage nipples\*

NOTE. The Standards referred to in this standard are listed on the inside back cover.

### 1.2 Sizes and size identification

The size of a fitting is identified by the nominal size of the pipe with which it is to be used.

For reducing fittings, the openings are given in the alphabetical sequence shown in Fig. 1, the run openings being stated first, followed by the outlet opening(s). In each case, the larger opening is specified first.

\* These fittings may be ordered in any combination of end preparation (see Table 12 with footnote).