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BRITISH STANDARD 336 : 1965

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SPECIFICATION FOR FIRE HOSE COUPLINGS AND ANCILLARY EQUIPMENT

BRITISH STANDARDS INSTITUTION

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SPECIFICATION FOR

FIRE HOSE COUPLINGS AND ANCILLARY EQUIPMENT

B.S. 336 : 1965

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THIS BRITISH STANDARD, having been approved by the Fire Standards Committee and endorsed by the Chairman of the Building Divisional Council, was published under the authority of the General Council on 7th May, 1965.

First published, March, 1928.
First revision, November, 1936.
Second revision, March, 1954.
Third revision, January, 1960.
Fourth revision, May, 1965.

The Institution desires to call attention to the fact that this British Standard does not purport to include all the necessary provisions of a contract.

In order to keep abreast of progress in the industries concerned British Standards are subject to periodical review. Suggestions for improvements will be recorded and in due course brought to the notice of the committees charged with the revision of the standards to which they refer.

A complete list of British Standards, numbering over 4000, fully indexed and with a note of the contents of each, will be found in the British Standards Yearbook, price 15s. The B.S. Yearbook may be consulted in many public libraries and similar institutions.

This standard makes reference to the following British Standards:

B.S. 218. Brass bars and sections (suitable for forging) and drop forgings.

B.S. 251. Naval brass (Admiralty mixture) bars and sections (suitable for machining and forging) and forgings.

B.S. 384. Hard-drawn phosphor bronze wire.

B.S. 750. Underground fire hydrants and dimensions of surface box openings.

B.S. 899. Rolled copper sheet, strip or foil.

B.S. 970. Wrought steels (bars, billets and forgings).

B.S. 1126. General requirements for the gas welding of aluminium.

B.S. 1154. Vulcanized rubber compounds.

B.S. 1172. Phosphorus deoxidized non-arsenical copper for general purposes.

B.S. 1400. Copper alloy ingots and castings.

B.S. 1470. Wrought aluminium and aluminium alloys for general engineering purposes. Sheet and strip.

B.S. 1471. Wrought aluminium and aluminium alloys for general engineering purposes. Drawn tube.

B.S. 1476. Wrought aluminium and aluminium alloys for general engineering purposes. Bars and sections.

B.S. 1490. Aluminium and aluminium alloy ingots and castings for general engineering purposes.

B.S. 1580. Unified screw threads.

B.S. 1615. Anodized aluminium.

B.S. 2090. Hook spanners, peg spanners, coupling wrenches and the related slots, holes and horns.

B.S. 2752. Vulcanized chloroprene rubber compounds.

B.S. 2779. Fastening threads of BSP sizes.

B.S. 2786. Round hard drawn brass wire for springs.

B.S. 3102. Brass eyelets and washers for general purposes.

British Standards are revised, when necessary, by the issue either of amendment slips or of revised editions. It is important that users of British Standards should ascertain that they are in possession of the latest amendments or editions.

The following B.S.I. references relate to the work on this standard:
Committee reference FSB/6 Draft for comment D 64/3818

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CONTENTS

	Page
Co-operating organizations	7
Foreword	9

SPECIFICATION

SECTION ONE : GENERAL

1. Scope	10
2. Materials	10
3. Workmanship and finish	11
4. Tolerances on machined dimensions	12
5. Tailpieces	12
6. Hydraulic test	13
7. Inspection	13
8. Testing facilities and manufacturer's certificate	13
9. Marking	13

SECTION TWO : DELIVERY HOSE COUPLINGS AND CONNECTORS

10. Materials	14
11. Construction	14
12. Dimensions	14

SECTION THREE : SUCTION HOSE COUPLINGS

13. Materials	16
14. Construction	16
15. Dimensions	16
16. Screw threads	16

SECTION FOUR : BRANCH PIPE

17. General	16
18. Materials	16
19. Dimensions	16
20. Screw threads	19

SECTION FIVE : NOZZLES FOR STANDARD BRANCH PIPES

21. General	19
22. Materials	19

	Page

SECTION SIX : FOAM INLET ADAPTOR

23. General	19
24. Materials	19

SECTION SEVEN : DIVIDING AND COLLECTING BREECHING

25. General	19
26. Materials	20

SECTION EIGHT : SINGLE OUTLET STANDPIPE WITH SWIVEL HEAD

27. General	20
28. Materials	20
29. Construction	20

SECTION NINE : DOUBLE OUTLET STANDPIPE WITH SWIVEL HEAD AND BLANK CAPS

30. Double outlet standpipes	21
31. Blank caps	21

SECTION TEN : NOZZLE SPANNERS

32. General	21
33. Materials	21
34. Deflection test	21

SECTION ELEVEN : HYDRANT KEYS AND BARS

35. General	22
36. Materials	22
37. Torque test	22

SECTION TWELVE : SUCTION STRAINERS FOR SUCTION HOSE

A. Metal strainers	
38. General	22
39. Materials	22
40. Construction	23
B. Basket strainers	
41. General	23
42. Material	23
43. Construction	23

AVA Documents Document Sharing Hub

Page

TABLES

1*a*. Instantaneous delivery hose couplings 15
1*b*. Alternative design of instantaneous delivery hose couplings with multi-serrated tails, in copper alloy 15
2. Suction hose couplings. Dimensions of female coupling, locking ring and washer 17
3. Suction hose couplings. Dimensions of male coupling and nut for female coupling 18
4. Limits and tolerances of screw threads for suction hose couplings 34
5. Approximate metric equivalents 44

FIGURES

1. General arrangement of multi-serrated type delivery hose coupling 25
2. General arrangement of ribbed tail type delivery hose coupling 26
3. Female coupling 27
4. Male coupling 28
4A. Alternative coupling made in copper alloy 28
5. Instantaneous female connector 29
6. Instantaneous female connector, dimensions 30
7. General arrangement of suction coupling, sizes 3 in, 4 in, and 5½ in 31
8. Washer 32
9. Tailpiece for female coupling 32
10. Locking ring 32
11. Male coupling 33
12. Nut for female coupling 33
13. Basic form of screw thread for suction hose couplings 34
14. Standard branch pipe 35
15. Nozzles for branch pipes 36
16. Foam inlet adaptor 37
17. Dividing and collecting breeching 38
18. Base for hydrant standpipes 39
19. Blank cap, male, for standpipes 40
20. Nozzle spanner 41
21. Hydrant key socket 41
22. Overall dimensions of strainers 42
23. Basket strainer for suction strainer 43

CO-OPERATING ORGANIZATIONS

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

*Board of Trade
*Chief Fire Officers Association
*County Councils Association
D.S.I.R. Building Research Station
Fire Extinguisher Trades Association
*Fire Offices Committee
Fire Protection Association
*Home Office
Industrial Fire Protection Association of Great Britain
Institution of Civil Engineers
*Institution of Fire Engineers
*Institution of Municipal Engineers
Joint Fire Research Organization of the D.S.I.R. and Fire Offices Committee
London County Council
London Fire Brigade
*Ministry of Aviation
Ministry of Labour (H.M. Factory Inspectorate)
*Ministry of Public Building and Works
National Council of Building Material Producers
Royal Institute of British Architects

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 British Standard:

Aluminium Federation
Association of Municipal Corporations
British Ironfounders Association
British Fire Services Association
British Valve Manufacturers Association
Crown Agents for Oversea Governments and Administrations
Institution of Mechanical Engineers
Ministry of Defence, Air Force Department
Ministry of Defence, Army Department
National Coal Board
National Physical Laboratory (D.S.I.R.)

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BRITISH STANDARD SPECIFICATION FOR

FIRE HOSE COUPLINGS AND ANCILLARY EQUIPMENT

FOREWORD

The revision of this British Standard is issued under the authority of the Fire Standards Committee. It includes a number of editorial corrections, minor redrafting in several of the clauses and introduces a new table and drawing covering an alternative design in copper alloy of an instantaneous delivery hose coupling with multi-serrated tail. A number of illustrations have been extensively revised and amendments made in Tables 2, 3 and 4 and in Figs. 3, 6, 7, 9, 10, 11, 12, 15, 18, 19, 20, 21, and 23.

With the exception of nozzle spanners and hydrant keys and bars, which can be either in aluminium or in steel, all components shown in the standard may be made in either aluminium or copper and copper alloys. It is necessary however to avoid as far as possible, the coupling of aluminium to copper or copper alloy, particularly for long periods, as electrolytic action may result from the close proximity of these metals to each other. It is also necessary to ensure that aluminium components are thoroughly washed with fresh water immediately after use with sea water or brackish water.

On die cast fittings where the bore is shown as parallel it is recommended that the manufacturer be allowed a reasonable taper to facilitate core withdrawal, but this taper should be kept to the minimum required for this purpose.

Tolerance dimensions have been given in sufficient detail to enable interchangeable components to be manufactured but it does not necessarily follow that all the manufacturing dimensions are given; where they are omitted the manufacturer is expected to use his experience in determining what these should be and if necessary consult the wishes of the purchaser.

It was considered that metric dimensions would cause confusion if added to the numerous dimensions in this standard where close limits have to be worked to.

NOTE 1. Metric equivalents are given in the appendix. The figures in British units are to be regarded as the standard. The metric conversions are approximate. More accurate conversions should be based on the tables in B.S. 350, ' Conversion factors and tables '.

NOTE 2. In place of the customary but incorrect use of the pound as a unit of force, the unit called the pound-force (abbreviation lbf) has been used in this standard. It is the force which, when acting on a body of mass one pound, gives it an acceleration equal to that of standard gravity.

SPECIFICATION

SECTION ONE : GENERAL

SCOPE

1. This British Standard applies to the following:

a. Delivery hose couplings and connectors of the instantaneous pattern:

(i) A hose coupling with tail variations for 1½, 1¾, 2, 2½, 2¾, 3 and 3½ in hose, as shown in Figs. 1, 3 and 4 for couplings with multi-serrated tails, and in Figs. 2, 3 and 4 for couplings with ribbed tails. An alternative gun-metal coupling with multi-serrated tail-piece, conforming to the dimensions in Table 1*b*, can be supplied to an alternative design shown in Fig. 4A.

(ii) A single lug twist release connector as in Figs. 5 and 6.

b. Suction hose couplings 3, 4, 5 and 5½ in sizes as in Figs. 7 to 13.

c. Branch pipes as in Fig. 14.

d. Nozzles for branch pipes, sizes ¼, ⅜, ½, ⅝, ¾, ⅞, 1, 1⅛ and 1¼ in as shown in Fig. 15.

e. Foam inlet adaptors as shown in Fig. 16.

f. Dividing and collecting breechings at 60° and 120° as in Fig. 17.

g. Single outlet swivel head standpipe base as in Fig. 18.

h. Double outlet swivel head standpipe base as in Fig. 18.

j. Blank cap as in Fig. 19.

k. Nozzle spanners as in Fig. 20.

l. Hydrant key and bar as in Fig. 21.

m. Suction strainers in sizes 3, 4, 5, 5½ in as in Fig. 22.

n. Basket strainers as in Fig. 23.

MATERIALS

2. *a. Castings and forgings.* Unless it is specially stated otherwise, components shall be made of one of the following materials:

(i) *Copper and copper alloys.* Any copper or copper alloy suitable for the method of manufacture employed, provided that the tensile strength is not less than 12 tonf/in². Copper alloys to the British Standards given below are recommended.

FOR SAND CASTINGS:

B.S. 1400* L-G2-C, 'Leaded gunmetal castings'.

* B.S. 1400, 'Copper alloy ingots and castings'.

FOR DIE CASTINGS:

B.S. 1400* B4-C, 'Brass gravity die castings' or B.S. 1400* B5-C, 'Naval brass gravity die castings' (the latter is recommended for continual use with sea-water).

FOR HOT FORGINGS:

B.S. 218, 'Brass bars and sections (suitable for forging) and drop forgings', or B.S. 251, 'Naval brass (Admiralty mixture) bars and sections (suitable for machining and forging) and forgings'. The latter specification is recommended for continual use with sea-water.

(ii) *Aluminium.* Material to the British Standard given below are recommended for sand and die castings unless other alloys are specifically given or alternatives shown for the individual items.

B.S. 1490† LM5-M, LM8-W, LM8-WP, LM16-WP, 'Aluminium alloy castings mainly used for sand castings and gravity die castings', or

B.S. 1490† LM6-M, 'Aluminium alloy castings (as cast) suitable for sand castings and gravity and pressure die castings'.

b. Springs and circlips. Any springs or circlips in couplings or fittings shall be made of wire complying with B.S. 384‡ or B.S. 970§, or of other not less satisfactory material approved by the purchaser, and shall be treated if necessary, to provide protection against corrosion. Springs of copper alloy shall not be used in aluminium components.

c. Other metal parts. Materials used for parts other than those referred to in *a* and *b* above or specifically referred to for the article, shall be carefully selected with a view to avoiding the possibility of corrosion by electrolytic action with adjacent materials. (This applies particularly where the parts are of copper alloy, as difficulties with aluminium only occur in the presence of copper.)

WORKMANSHIP AND FINISH

3. *a. Workmanship.* All parts shall be of good workmanship and finish. They shall be machined where shown in the figures in this specification; otherwise the finish shall be bright as cast. Exposed aluminium surfaces shall have an anodized finish when so ordered. This finish shall comply with B.S. 1615‖, thickness Grade AA25, sealed to meet the requirements of Method C. Castings

*B.S. 1400, 'Copper alloy ingots and castings'.
† B.S. 1490, 'Aluminium and aluminium alloy ingots and castings for general engineering purposes'.
‡ B.S. 384, 'Hard-drawn phosphor bronze wire'.
§ B.S. 970, 'Wrought steels (bars, billets and forgings)'.
‖ B.S. 1615, 'Anodized aluminium'.

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