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FORMED IN 1901 AS THE ENGINEERING STANDARDS COMMITTEE
BY
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THE INSTITUTION OF MECHANICAL ENGINEERS.
THE INSTITUTION OF NAVAL ARCHITECTS.
THE IRON AND STEEL INSTITUTE.
THE INSTITUTION OF ELECTRICAL ENGINEERS.

BRITISH STANDARD SPECIFICATION FOR STEEL CONDUITS AND FITTINGS FOR ELECTRICAL WIRING.

(REVISED DECEMBER, 1923.)

(PREPARED IN CO-OPERATION WITH THE GOVERNMENT INTERDEPARTMENTAL COMMITTEE.)

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The following have officially co-operated in the preparation of this Specification :—

Government Interdepartmental Committee.
Institution of Electrical Engineers.
National Physical Laboratory.
Association of Consulting Engineers.
Manufacturers of Steel Conduits and Fittings.
Fire Offices Committee.
Incorporated Municipal Electrical Association.
Incorporated Association of Electrical Power Companies.
National Electrical Contractors' Trading Association.

This Specification was adopted by the Sectional Electrical Committee at their Meeting on 26th October, 1923, and approved on behalf of the Main Committee on 15th December, 1923.*

NOTE.

In order to keep abreast of progress in the Industries concerned, the British Standard Specifications are subjected to periodical revision.

Suggestions for improvements addressed to the Secretary, British Engineering Standards Association, 28, Victoria Street, London, S.W.1, will be welcomed at all times. They will be recorded and in due course brought to the notice of the Committees charged with the revision of the Specifications to which they refer.

** The Sectional Electrical Committee is the British National Committee of the International Electrotechnical Commission.*

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BRITISH

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CONTENTS.

NOMENCLATURE.

		PAGE
1 (*a*).	Conduit	5
1 (*b*).	Fittings	6

MANUFACTURE.

2.	Material and Method of Manufacture	6
3.	Screw Threads	7
4.	Outside Diameter of Conduit	7
5.	Length of Conduit	7
6.	Length of Thread	7
7.	Thickness of Conduit	7
8.	Thickness of Fittings	7
9.	Length of Recessed Portion in Plain Fittings	8
10.	Length of Thread in Screwed Fittings	8
11.	Plain Couplers	8
12.	Screwed Couplers	8
13.	Running Couplers	8
14.	Elbows	8
15.	Normal Bends	8
16.	Half Normal Bends	9
17.	Tees	9
18.	Split Fittings	9
19.	Small Circular Boxes	9
20.	Large Circular Boxes	9
21.	Oblong Boxes	9
22.	Inspection Fittings	10
23.	Covers for Circular Boxes	10
24.	Covers for Oblong Boxes	10
25.	Ordinary Clips	10
26.	Girder Clips	10
27.	Single and Multiple Saddles	10
28.	Pipe Hooks	11
29.	Screwed Reducers	11
30.	Iron Plugs	11
31.	Lock-nuts	11

TESTS.

		PAGE
32.	General	11
33.	Test Pieces for Steel	11
34.	Test of Malleable Cast Iron	11
35.	Test of Galvanising	12
36.	Tests for Dimensions	12
37.	Additional Tests for Dimensions	12

TABLES.

I.	Standard Dimensions of Steel Conduits	13
II.	Standard Dimensions of Fittings	13
III.	Standard Dimensions of Tees, Elbows, Normal and Half Normal Bends, Figs. 1 to 4	14
IV.	Standard Dimensions of Small and Large Circular Boxes (including Inlet Dimensions for Oblong Boxes), Fig. 5	15
V.	Standard Dimensions of Dome Covers, Fig. 6	16
VI.	Standard Dimensions for Clips, Figs. 7 and 8	17
VII.	Standard Dimensions of Saddles, Figs. 9 and 10	18
VIII.	Standard Dimensions of Pipe Hooks, Screwed Reducers and Iron Plugs, Figs. 11, 12 and 13	19
	Minimum Internal Dimensions for Oblong Boxes	9

APPENDICES.

I. Gauging—

1.	Outside Diameter of Conduits	20
2.	Inside and Outside Diameters of Couplers and Tube Fittings	20
3.	Screw Thread	21
4.	Checking of Gauges	21

II. Approximate Metric Equivalents ... 22

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Note.—The Association desires to call attention to the fact that this Specification is intended to include the technical provisions necessary for the supply of the material herein referred to, but does not purport to include all the necessary provisions of a contract.

BRITISH STANDARD SPECIFICATION FOR STEEL CONDUITS AND FITTINGS FOR ELECTRICAL WIRING.

(REVISED DECEMBER, 1923.)

NOMENCLATURE.

NOTE.—*In order to avoid misconceptions in regard to designations hitherto used, it is desirable that the terms adopted in this Specification should be carefully adhered to.*

Conduit.

1. (*a*) Two classes of Steel Conduit for Electrical Wiring are recognised as Standard :—

Class A.—Plain.
Class B.—Screwed.

Class A consists of light gauge Conduit of the thicknesses and dimensions given in Table I. Class A Conduit is either close-joint, brazed, welded or solid drawn. The Coupler joining the lengths of tubing is a sleeve, and neither the ends of the Conduit nor the Coupler are screwed.

In the close-joint tubes, the edges of the steel strip, although brought tightly together in the process of manufacture, are not metallically joined in any way.

Class B consists of heavy gauge Conduit of the thicknesses and dimensions given in Table I. Class B Conduit is either brazed, welded or solid drawn. Both ends of the Conduit are screwed.

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Fittings.

1. (*b*) Two classes of Fittings are recognized as Standard, namely, Plain and Screwed, the difference being only in respect of whether the fitting is screwed for use with Class B Conduit or plain for use with Class A Conduit.

Circular Boxes.—Circular Boxes shall be designated as follows :—

(*a*) *Back Outlet

(*b*) Terminal

(*c*) Through

(*d*) Angle

(*e*) Tee

(*f*) Intersection

These boxes are supplied with covers of the following materials as required:—Light Pressed Steel, Malleable Cast Iron or Fibre (*see* Clause 23).

**Note.*—As a "Back Outlet" Box is also a "Terminal" Box, the word "Terminal" has been reserved for a box with one entry at the side. A box fitted with two entries, one at the side and one at the back, should be referred to as a "Terminal Box with Back Outlet."

Oblong Boxes.—Oblong Boxes shall be designated as follows :—

(*a*) Through

(*b*) Tee

(*c*) Intersection

These boxes are supplied with covers of the following materials as required:—Light Pressed Steel or Malleable Cast Iron (*see* Clause 24).

MANUFACTURE.

Material and Method of Manufacture.

2. Steel Conduits shall be either close-joint, brazed, welded or solid drawn as ordered, and shall be of mild steel and free from burrs and internal roughness. The Conduit Fittings shall be made of steel or malleable iron. All steel shall have a tensile strength of not less than 18 tons nor more than 24 tons per square inch of section, and an elongation of not less than 15 per cent. in a length of 8 inches. Malleable castings shall be well annealed and free from internal projections.

Unless otherwise specified with the order, all Conduits and Fittings shall be stove enamelled jet black or galvanised by the hot process both inside and out. The enamel of the finished Conduit and Fittings shall be smooth, continuous, tough and firmly adherent, free from rough and missed places and cracks. The screw threads shall be free from enamel. The materials and galvanising shall comply with the tests given in Clauses 32 to 35 of this Specification. The galvanising shall adhere firmly to the surface of the tubes and be smooth and uniform throughout, and shall be such that the tubes can be bent as specified in Clause 33 (Tests), without showing any injury to the galvanising.

The inside edges of all holes through which it is intended that cable shall pass shall be smoothly rounded in order to prevent sharp edges.

Screw Threads.

3. Screw Threads on Conduits and Fittings shall be of the Whitworth form* of thread as defined in British Standard Specification No. 21, Pipe Threads, and shall have the depth of thread given in Table I. Gauges for testing the screw thread shall be in accordance with Appendix I.

Outside Diameter of Conduit.

4. The Conduits shall be manufactured to and designated by the respective outside diameters given in Table I.

Length of Conduit.

5. The Conduit shall be manufactured in straight lengths of from ten to fifteen feet, and one coupler shall be supplied with each length of screwed conduit.

Length of Thread.

6. The length of thread on the ends of the Conduits shall be in accordance with the dimensions given in Table I.

Thickness of Conduit.

7. The Conduits shall be manufactured to the respective thicknesses given in Table I.

The average thickness of Steel Conduits shall be determined by weighing not less than one hundred feet (100 ft.). The weight shall fall within plus or minus 8 per cent. of the figures given in Table I.

Thickness of Fittings.

8. For all fittings made out of *tube*, the minimum thickness of the fittings shall be equal to that of the corresponding conduit with which they are used. (*See* Tables I. and II.). In no case shall "close joint" tube be used for these fittings.

* In this thread the angle between the slopes measured in the axial plane is 55°; the threads are rounded equally at crests and roots, leaving a depth of thread approximately equal to 0·64 times the pitch.

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