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14 CEILINGS

14.1 GENERAL DESCRIPTION

14.1.1 Scope

1 This Part specifies the requirements for suspended ceiling systems of lay-in type and fixed type construction.

2 Related Parts and Sections are as follows:

This Section

Part 1 ..... General
Part 3..... Dry lining (Wallboard)
Part 10..... Joints, Caulking and Sealants

Section 17 Metal Work
Section 18 Carpentry
Section 26 Painting and Decorating

14.1.2 References

1 The following standards are referred to in this Section:

BS 476.....Fire tests on building materials and structures

BS 476-6 .....Fire tests on building materials and structures - Method of test for fire propagation for products.

BS 476-7 .....Fire tests on building materials and structures - Method of test to determine the classification of the surface spread of flame of products.

BS 1191.....Specification for gypsum building plasters.

BS 1230.....Specification for gypsum plasterboard; (BS 1230-1 Gypsum plasterboard - Specification for plasterboard excluding materials submitted to secondary operations; EN 520 Gypsum plasterboards - Definitions, requirements and test methods)

BS 5492.....Code of practice for internal plastering; (BS 8481 Design, preparation and application of internal gypsum, cement, cement and lime plastering systems. Specification; EN 13914-2 Design, preparation and application of external rendering and internal plastering - Internal plastering; CEN/TR 15123 Design, preparation and application of internal polymer plastering systems)

BS 8000.....Workmanship on construction sites

BS 8212.....Code of practice for dry lining and partitioning using gypsum plasterboard; (BS 8000-8 Workmanship on construction sites - Design and installation of dry lining systems. Code of practice)

BS 8290.....Suspended ceilings; (EN 13964 Suspended ceilings. Requirements and test methods)

BS 8290-3 .....Suspended ceilings - Code of practice for installation and maintenance; (EN 13964 Suspended ceilings. Requirements and test methods)

EN 520 .....Gypsum plasterboards - Definitions, requirements and test methods

14.1.3 General Requirements

1 The suspended ceilings shall not be installed until:

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(a) the building is weathertight

(b) the wet trades have finished their work

(c) all work above the ceilings such as ductwork, pipework and electrical work has been installed, tested, inspected and approved

(d) the positions of light fittings, diffusers and the like have been checked

(e) the position of access panels have been confirmed with the Engineer.

2 The ceiling shall be installed to within 3 mm of required level. When measured against a straight edge over a distance of 3 m, the gap between the straight edge and the ceiling shall not exceed 3 mm.

3 The manufacturer's recommendations for the use and installation of products covered in this Part shall be strictly adhered to unless otherwise agreed with the Engineer.

4 Existing conditions shall be inspected before commencing installation of suspended ceilings to ensure the following:

(a) that services all have been installed

(b) that fastenings and supports installed by others are in place

(c) that installation of others will not touch the back of ceiling system.

The Contractor shall verify to the Engineer in writing that such inspections has been performed and that work is ready to commence.

14.1.4 Submittals

1 The Contractor is to submit shop drawings showing general layout, support framing, and installation details including lay-in, hanger and support details.

2 Samples of support framing, lay-in, lay-in hangers and hanger insert are to be submitted for approval.

3 Suspended ceilings shall comply with the relevant provisions of BS 8212 and BS 8290.

14.2 LAY-IN TYPE SUSPENDED CEILINGS

14.2.1 General

1 The lay-in material shall be tile, plank or strip membrane, as detailed in the Project Documentation.

2 The lay-in material shall have a fire performance when tested in accordance with BS 476 which satisfies the requirements of:

(a) class 0 - BS 476, Part 6.

(b) class 1 - BS 476, Part 7.

3 The Contractor shall produce certificates that certify that the requirements of Clause 14.2.1-2 are met.

4 The suspension system and shall be constructed from hot dipped galvanized steel sections and galvanized wire or similar non-corrodable materials and fixings.

14.2.2 Installation

1 The tiles shall be set out so that:

(a) the soffits are level, free from undulations and lipping, with all lines and joints straight and parallel to walls unless shown otherwise in the Project Documentation

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(b) they are symmetrical about the centre lines of the roof, or space, beginning with a tile or joint line as required to avoid narrow tiles at the perimeter edges.

2 At junctions between the ceiling and walls, and between the ceiling and columns, the ceiling shall be finished with perimeter edge trim. The trim shall be fixed at maximum 450 mm centres.

3 Additional hanging supports shall be provided between the floor or roof structure above and the suspended ceiling at all access panels, light fittings, diffusers, etc. The lay-in material shall be accurately cut to accommodate all such fittings. Under no circumstance shall any fitting be supported by the lay-in material.

4 Care shall be taken to ensure that the tiles, planks and strip membrane are kept clean if subsequently removed for access to services, for inspection or for remedial work.

14.3 FIXED TYPE SUSPENDED CEILINGS

14.3.1 General Requirements

1 Gypsum board will be used for fixed type suspended ceilings unless otherwise indicated in the Project Documentation.

2 Installation of gypsum board for suspended ceilings and associated plaster or rending work shall comply with the relevant provisions of BS 1191 and BS 5492.

14.3.2 Materials

1 Gypsum wall board shall be either 9.5 or 12.7 mm thick gypsum plasterboard complying with BS 1230, having one face finished for direct decoration.

2 Thermal wall board shall comply with Table 3.1 of Part 3 of this Section and shall consist of an insulation core having a thermal conductivity of not less than 0.037 W/m ºC bonded on one side to gypsum wall board and on the reverse side with a water-vapour resistant membrane.

3 The edge profiles of wall board shall be:

(a) “tapered” for smooth seamless jointing.

(b) “bevelled” for V-jointing.

(c) “square” for stippled textured coatings, cornerstrip jointing or plaster.

4 Accessories for installing wallboard shall be approved proprietary materials recommended by the manufacturer of the wallboard or ceiling system, inclusive of the following:

(a) soffit assemblies, where indicated on drawings shall consist of galvanized steel channel runners and studs faced with gypsum panels, screw attached unless specified otherwise and approved by the Engineer

(b) hangers, hanger attachments, support carrier members with connectors, and trim members related to ceiling as is required for complete

(c) fabricated miscellaneous clips, splices, connectors, screws, and other standard metal accessories of strength and design compatible with the suspension methods and system.

14.3.3 Installation

1 The Contractor shall ensure that adequate preparation is made for attachment of hangers and fasteners and provide for support and incorporation of flush-mounted and recessed fittings and service components.

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2 The ceiling system shall be installed in accordance with manufacturer's recommendations and to BS 8290 Part 3.

END OF PART

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