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5 ROOFING TILES AND SHINGLES

5.1 GENERAL

5.1.1 Scope

1 This Part specifies requirements for and the installation of roof tiles made of clay, shale and concrete, and additionally for shakes or shingles made of other materials.

2 Related Sections are as follows:

This Section

Part 1..... General

Part 2..... Membrane Roofing

Part 3..... Metal and Plastic Roofing

Part 4..... Roof and Deck Insulation

Section 1 General

Section 5 Concrete

Section 13 Masonry

Section 14 Roofing

Section 15 Thermal Insulation of Buildings

Section 17 Metalwork

Section 18 Carpentry, Joinery and Ironmongery

Section 24 Finishes to Buildings

3 In general, roofing tile and shingle materials and their application shall conform to BS 5534, BS 8000 Part 6, EN 490, EN 491 and EN 539.

5.1.2 References

1 The following standards are referred to in this Section:

BS 402.....Clay plain roofing tiles and fittings

BS 680.....Roofing slates

BS 747.....Roofing felts

BS 1202.....Nails

BS 1521.....Waterproof building papers

BS 4016.....Building papers (breather type)

BS 5534.....Code of Practice for slating and tiling

BS 8000.....Workmanship on building sites

EN 490Concrete roofing tiles and fittings - Product specifications

EN 491Concrete roofing tiles and fittings - Test methods

EN 538Clay roofing tiles for discontinuous laying flexural strength test

EN 539Clay roofing tiles for discontinuous laying - determination of physical characteristics

5.2 CLAY SHALE AND CONCRETE ROOFING TILES

5.2.1 General

1 Roofing tiles made of clay, shale and concrete roofing tiles shall comply with (but are not limited to) the respective standards as follows:

- (a) clay, shale roofing tiles: BS 402, BS 680, EN 538, EN 539, and BS 8000 Part 6
 - (b) concrete roofing tiles: BS 680, EN 490 and 491, and BS 8000 Part 6.
- 2 Submittals of roofing materials to be used will be made by the Contractor in accordance with the relevant provisions of Section 1, General, shall include furnishing of the following:
- (a) samples of each colour of each type of tile required in the Works; the tiles shall be of finished product quality and shape
 - (b) shop drawings with details of any fabricated custom shapes and installation requirements.
- 3 Product Delivery, Storage and Handling:
- (a) tiles and setting materials shall be delivered in manufacturers' original, unopened containers clearly identifying manufacture and the contents
 - (b) tiles shall not be stored in the flat position.
- 4 The Contractor shall guarantee materials and workmanship to be free from defects and leaks for a period of two (2) years.

5.2.2 Products

- 1 Clay and shale roofing tiles shall be English, French, Greek, Roman or Spanish type unless otherwise specified in the Project Documentation or approved by the Engineer, and all tiles are to be hard burned, dense, fully vitrified, clay or shale, free from fire cracks or defects.
- 2 Concrete roof tiles will be of quality materials to EN 490 and EN 491.
- 3 Non-interlocking locking or interlocking tiles are acceptable, but should not be intermixed in use.
- 4 Nails brads, staples and spikes and any other fasteners used to secure tiles shall be corrosion-resistant nails or wire to BS 1202.
- 5 Felt underlay should be to tile manufacturer's recommendations for related roof slope. Felt underlay shall be asphalt saturated organic felt, without perforations, nominal 66 kg/m² to BS 747 unless otherwise shown on the drawings and shall comply to BS 4016, BS 1521 and BS 747.

5.2.3 Execution of Installation

- 1 Vent pipes and other projections through roofs and flashing materials are to be in place before laying tiles.
- 2 Felt underlay shall be laid in single thickness, parallel to eaves with double thickness at hips and ridges. Horizontal joints shall be lapped 75 mm and vertical joints lapped 150 mm. Vertical joints shall be staggered. Felt shall be extended up 150 mm at abutting vertical walls, chimneys and parapets. Under the edges of built-up gutters, valleys, and metal flashings, the felt shall be lapped not less than 100mm.
- 3 Laying Tile
 - (a) tiles shall be laid free of horizontal obstructions which would impede shedding of surface water
 - (b) courses shall be laid parallel with eaves
 - (c) each tile shall be secured by at least two nails, of copper or stainless steel wire and shall be fastened where practicable
 - (d) nails and wire fastenings in finished work shall be covered

- (e) tiles shall be laid with an end lap of at least 75 mm
 - (f) fill laps of end bands, of tiles on ridges, and gable rakes with roofers plastic cement
 - (g) roofers plastic cement may be used for levelling tiles and for pointing around eave bridge closures.
- 4 Upon completion of the tiling, any cement splatter shall be removed from tile and adjacent surfaces.

5.3 ROOFING SHINGLES

5.3.1 General

- 1 Roofing shingles, as specified in this Section, are inclusive of all non-clay, shale or concrete tiles which are used in the same manner as roofing elements used in an overlapping system on sloped roofs.

5.3.2 Metal, asbestos-cement and Asphalt Shingles

- 1 Metal, asbestos-cement and asphalt shingles shall be installed in an approved manner as established by acceptable proprietary manufacturers and as detailed in the drawings

5.3.3 Shakes and Shingles of Other Materials

- 1 Other shake or shingle products of man-made plastic or compounds will require submittal of product specification and samples for testing prior to approval. Such products shall be installed in an approved manner as established by acceptable proprietary manufacturers and as detailed in the drawings.

END OF PART