SECTION 150 BRICKWORK, BLOCKWORK AND MASONRY

Application of standards 1

Brickwork, blockwork and stone masonry shall comply with BS 5628 and BS 5390 where applicable unless qualified by the following Clauses.

The positions in the Works of the varieties of bricks, blocks and masonry, together with their colour, texture etc. shall be as shown on the Contract Drawings.

(150.001)

Clay bricks 2

Clay bricks shall comply with BS 3921.

Engineering and facing bricks shall be to durability designation FL and shall be solid without holes or have a frog on one face.

Common bricks shall be used internally or for backing. When exposed in the finished work common bricks shall be as for facing bricks.

(150.002)

Calcium silicate 3

Calcium silicate (sand lime and flint lime) bricks shall comply with BS 187, and shall be solid as defined in BS 187.

Bricks for load bearing applications shall be Class 5 or above.

Facing bricks and common bricks shall be Class 3 or above.

(150.003)

Precast concrete bricks 4

Precast concrete bricks shall comply with BS 6073: Part 1, and shall be solid or frogged with no perforations. The work size of the bricks shall be 215 x 103 x 65 mm.

Bricks for external use shall have a minimum compressive strength of 40 N/mm² and a minimum cement content of 350 kg/m³.

Bricks for internal use shall have a minimum compressive strength of 20 N/mm².

Admixtures containing calcium chloride shall not be used.

Non autoclaved precast concrete bricks shall be stored for not less than four weeks before delivery.

(150.004)

Precast concrete blocks 5

Precast concrete blocks shall comply with BS 6073: Part 1.

Precast concrete blocks for **(INSERT)** shall be /solid /cellular /hollow /blocks, work size **(INSERT)** x **(INSERT)** x **(INSERT)** mm with a minimum compressive strength of **(INSERT)** N/mm².

Non autoclaved precast concrete blocks shall be stored for not less than four weeks before delivery.

(150.005)

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Cement for mortar 6 Cement for mortar shall be Portland cement complying with BS 12, sulphate resisting Portland cement complying with BS 4027 or masonry cement complying with BS 5224.

(150.006)

Lime for mortar 7 Lime for mortar shall be high calcium lime, semi-hydraulic lime or magnesium lime complying with BS 890. Lime shall not be added to masonry cement.

(150.007)

Sand for mortar 8 Sand for mortar shall comply with BS 1200 and shall be washed sand or natural crushed rock. Sand from a marine source shall not be used.

(150.008)

Water 9 Water not taken from a Water Supply Company shall be tested in accordance with BS 3148 and the recorded levels of impurities submitted to the Employer's Representative for agreement to use the water in the Works.

(150.009)

Admixtures 10 Air entraining (plasticising) or set retarding admixtures shall comply with BS 4887. Retarding admixtures shall only be used as part of wet ready mixed retarded cement:lime:sand mixes where agreed by the Employer's Representative and where adequate suction will be obtained in accordance with Clause 150.013.

Admixtures containing calcium chloride shall not be used.

Colouring pigments shall comply with BS 1014.

(150.010)

Pointing or mastic sealing compounds 11 Pointing or mastic sealing compounds shall be polysulphide one part gun grade compounds complying with BS 5215 for joint gaps less than 13 mm. For joint gaps above 13 mm up to the maximum of 50 mm the compounds shall be butyl pre-extruded strip mastic or knife grade as appropriate.

(150.011)

Sampling of bricks and blocks 12 Samples of the proposed bricks or blocks shall be provided to the Employer's Representative for acceptance. Samples shall be selected in accordance with the requirements of BS 3921, BS 187 appendix A or BS 6073: Part 1 as applicable. Bricks delivered to the Site shall be equal in all respects to the accepted samples with quality assurance monitored by sampling.

(150.012)

Suction 13 The moisture content of clay bricks shall be controlled before laying ensure that the suction rate is not greater than 2 kg/m²/minute. Calcium silicate bricks shall not be wetted without the agreement of the Employer's Representative.

Suction test A suction test shall be executed as follows:

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A large photographic dish or similar tray, shall be placed on a level table. Two metal rods, or pieces of angle of equal size, shall be placed in the bottom of the dish and the dish filled with water, until the metal rods are covered to a depth of about 3 mm.

The brick to be tested, which shall be dry, shall be weighed to the nearest gram and shall be placed, bed face downwards, on the metal rods and left in position for 60 ± 2 seconds at room temperature after which period the brick shall be removed, surplus water quickly wiped off with a damp cloth, and be re-weighed. The water level in the tray shall be adjusted as necessary when a series of bricks is tested.

Suction rate

The suction rate of the brick shall not exceed 2 kg/m²/minute.

(150.013)

Brickwork to match and bond with existing

14 Notwithstanding the provisions of the preceding Clauses, where brickwork is required to match and to be bonded with existing brickwork, equivalent sizes of bricks shall be used to those in adjacent brickwork.

(150.014)

Imperfect bricks and blocks

15 Imperfect bricks and blocks and over or under burnt bricks shall not be incorporated in any part of the Works and shall be removed from the Site.

(150.015)

Mortar: grade, mix proportions, application etc.

16 Mortar shall be designated as cement:lime:sand (compo) mortar, cement mortar, masonry cement mortar or air-entrained (plasticised) mortar. Cement:lime:sand (compo) mortar shall be lime:sand (coarse stuff) gauged with cement.

Mortar for **(INSERT)** shall be **(INSERT)**.

Cement:lime:sand (compo) mortar using Portland cement and shall be prepared as cement gauged coarse stuff, i.e. the mortar shall be prepared by mixing the sand and lime constituents to the correct proportions as an initial operation carried out at not less than sixteen hours before the mortar is to be used. Immediately before use the sand and lime coarse stuff shall be re-mixed to the correct wet consistency and gauged with the appropriate volume of cement.

Mortar shall be mixed with suitable mechanical mixers. Small quantities may be mixed by hand with the agreement of the Employer's Representative on well formed watertight banker boards. High shear mixers, roller mortar mills and hand mixing shall not be used for air entrained mortars.

Batched mixes shall be used up within 2 hours of mixing or shall be discarded. Within this time limit the materials may be reconstituted (knocked up) with small quantities of additional water where required to maintain a practical workability. Volume proportions shall be correctly gauged with purpose made gauge boxes and due allowance made for the bulking of damp sand.

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