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Code for acceptance of constructional quality of masonry structures

砌体结构工程施工质量验收规范

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2 Terms

2.0.1 masonry structure - a structure in which walls and columns built of units and mortar are the main load-bearing members of the building. It is the collective name for brick masonry, block masonry and stone masonry structures.

2.0.2 reinforced masonry - a structure in which masonry containing reinforcement is the

main load-bearing member of the building. It is the collective name for mesh-reinforced masonry columns, horizontally reinforced masonry walls, composite masonry columns and walls of brick masonry with a reinforced concrete or reinforced mortar facing, composite walls of brick masonry with reinforced concrete tie columns, and reinforced small block masonry shear wall structures.

2.0.3 masonry units - the collective name for the bricks, stones and small blocks used in masonry.

2.0.4 small block - a block whose main specified height is greater than 115 mm and less than 380 mm, including ordinary concrete small hollow blocks, lightweight aggregate concrete small hollow blocks and autoclaved aerated concrete blocks. It is called small block for short.

2.0.5 products age - the number of days from the moment fired bricks leave the kiln, autoclaved bricks and autoclaved aerated concrete blocks leave the autoclave, or concrete bricks and concrete small hollow blocks are formed, up to a given date.

2.0.6 special mortar for autoclaved aerated concrete block - a mortar matched to the properties of autoclaved aerated concrete that meets the construction requirements and the masonry performance of autoclaved aerated concrete block masonry. It is divided into the adhesive mortar for autoclaved aerated concrete blocks used with the thin-layer mortar method and the masonry mortar for autoclaved aerated concrete blocks used with other methods.

2.0.7 ready-mixed mortar - wet-mixed mortar or dry-mixed mortar produced by a specialized plant.

2.0.8 The term for the grading of the construction quality control level is defined as the grading of the technical level of the construction work against a number of quality control and quality assurance factors. The English gloss printed against this term reads category of constuction quality control; the spelling is reported as printed.

2.0.9 blind seam - a horizontal or vertical joint in masonry in which the adjacent units have no masonry mortar between them and touch one another.

2.0.10 suppositious seam - a vertical joint in which mortar has been spread only near the face of the masonry, with no mortar inside, in order to hide an internal quality defect of the bed joint.

2.0.11 continuous seam - a vertical joint in masonry where the overlap length between the units of the upper and lower courses is less than the specified value.

2.0.12 comparatively percentage of moisture - the ratio of the moisture content to the water absorption.

2.0.13 the method of thin-layer mortar masonry - the construction method in which

autoclaved aerated concrete block walls are built with adhesive mortar for autoclaved aerated concrete blocks, the thickness of the horizontal joint and the width of the vertical joint being 2 mm to 4 mm. It is called the thin-bed method for short.

2.0.14 core column - a column formed by pouring concrete into the holes of a small block wall; it may be a plain concrete core column or a reinforced concrete core column.

2.0.15 in-situ inspection - the activity in which a testing body holding the proper qualification uses standard test methods to carry out in-place testing on the works themselves, or takes samples for testing in a laboratory.

3 Basic requirements

3.0.1 The materials used in masonry structure works are to have a product conformity certificate and a type test report of the product performance, and their quality is to meet the requirements of the current relevant national standards. Units, cement, reinforcement and admixtures are also to have a re-inspection report of their main properties on arrival at the site and are to meet the design requirements. Materials that the state has formally withdrawn are strictly forbidden.

3.0.2 A construction scheme for the masonry structure works is to be prepared before the works start.

3.0.3 The levels and the axes of a masonry structure are to be taken from the datum control points.

3.0.4 Before the foundation masonry is built, the setting-out dimensions are to be checked, and the permissible deviations are to follow Table 3.0.4. The table pairs ranges of length and width, in metres, with a permissible deviation in millimetres, the tolerance widening as the dimension grows.

3.0.5 The formwork in expansion joints, settlement joints and seismic joints is to be removed completely, and no mortar, units or debris are to be left in the joint.

3.0.6 The order of building is fixed: where the levels of the foundation bottom differ, building is to start from the lower part and to lap from the higher part towards the lower one, and where the design gives no requirement the lap length is not to be less than the difference in level of the foundation bottom, the lower foundation being widened within the lap length as shown in the figure; corners and junctions of masonry are to be built at the same time, and where that is not possible the toothing and the joining are to follow the rules.

3.0.7 A storey pole is to be set up when walls are built.

3.0.8 Where a temporary construction opening is left in a wall, the distance from its side to the wall face at a junction is not to be less than 500 mm and the clear width of the opening is not to exceed 1 m. In buildings in areas with a seismic fortification intensity of 9 degrees,

the position of a temporary construction opening is to be settled together with the design body. Temporary construction openings are to be properly filled in afterwards.

3.0.9 The clause lists eight walls or places where putting-log holes are not allowed: walls 120 mm thick, facing brickwork, dressed stone walls, free-standing columns and columns attached to walls; the triangular area at 60 degrees above a lintel and the height equal to half the clear span of the lintel; piers between windows less than 1 m wide; within 300 mm of the two sides of a door or window opening in stone masonry and within 200 mm in other masonry, and within 600 mm of a corner in stone masonry and 450 mm in other masonry; under a beam or a beam pad and within 500 mm on either side of it; places where the design does not allow putting-log holes; lightweight walls; and the outer leaf of a cavity composite wall.

3.0.10 When putting-log holes are filled in, the mortar and dust fallen inside them are to be cleared away, the bricks of the hole and the bricks used to fill it are to be wetted, and the mortar is to be packed solid.

3.0.11 Openings, chases and pipes required by the design are to be left or embedded correctly while the masonry is built; without the agreement of the design body, walls are not to be chiselled and horizontal chases are not to be cut in them. A reinforced concrete lintel is to be provided over an opening more than 300 mm wide. Pipes and cables are not to be embedded in load-bearing walls or free-standing columns whose long side of section is less than 500 mm.

3.0.12 For walls or columns whose floor or roof has not yet been built, the free height allowed against wind is not to exceed the values of Table 3.0.12; where the limits of the table are exceeded, temporary propping or other effective measures must be used. The table is arranged by wall or column thickness in millimetres against three wind load values in kilonewtons per square metre, in two blocks of columns for two ranges of masonry density in kilograms per cubic metre, and it carries three notes on the height of the working level, on the effect of connecting cross walls and on masonry of lower density.

3.0.13 After the foundation or each storey has been built, the axes and the levels of the masonry are to be checked. Within the permissible deviation, an axis deviation may be corrected at the top of the foundation or at the floor level, and a level deviation should be corrected by adjusting the thickness of the bed joints of the masonry above.

3.0.14 The top surface of masonry on which precast beams or slabs are to be seated is to be even and at a consistent level.

3.0.15 The construction quality control level of masonry is divided into three grades and is to be graded according to Table 3.0.15.

3.0.21 At the acceptance of an inspection lot of masonry structure works, all the main control items are to meet the provisions of the document; at least 80 % of the sampled