Title (en)

STRUCTURAL MODULE AND METHOD FOR MOUNTING STRUCTURAL MODULES

Title (de)

BAUMODUL UND VERFAHREN ZUR MONTAGE VON BAUMODULEN

Title (fr)

MODULE STRUCTUREL ET PROCÉDÉ DE MONTAGE DE MODULES STRUCTURELS

Publication

EP 3059354 B1 20180418 (EN)

Application

EP 16156124 A 20160217

Priority

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Abstract (en)

[origin: EP3059354A1] The invention relates to a modular construction sector, in particular, to structures of modular building elements, which already have bearing, heat-insulating and facing layers and are used for construction of residential and public buildings having any number of stories without using a cement grout. Further, the invention relates to methods of mounting structural modules of the proposed design having bearing, heat-insulating and facing layers in construction of residential and public buildings. The structural module comprises a bearing wall, preferably, reinforced concrete element having, preferably, the form of a rectangular parallelepiped, a heat-insulating layer, a reinforcing layer, and a facade layer. The heat-insulating layer, the reinforcing layer and the facade layer are made so that there is an indention from an edge of the bearing wall element. Width of indention L from an edge of the bearing wall element and an edge of the heat-insulating layer, the reinforced layer and the facade layer is within 100...250 mm. Thickness of the heat-insulating layer and facade layer provides thermal conductivity of the structural module within k=2.9...3.5 W/m 2 K. The reinforcing layer has shear strength of at least 0.8 MPa when coupled with the facade layer. A method of mounting structural modules comprises installation, fixing and fastening of bearing wall elements having heat-insulating, reinforcing and facade layers to each other with coupling elements, application of a protective coating on coupling elements and sealing of joints between bearing elements of adjacent structural modules. A gap between heat-insulating layers of adjacent modules is filled with a heat-insulating material followed by sealing of joints between the heat-insulating material and surfaces of structural modules followed by fixing insulating linings onto the surface of modules and mechanical fastening thereof to the bearing wall element of the module. Insulating linings are at least 5 % wider the gap between heat-insulating layers of adjacent modules.

IPC 8 full level

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