

Title (en)

COMPLETE MODULAR BUILDING SYSTEM WITH A UNIFORM STEEL FRAME STRUCTURE

Title (de)

KOMPLETTES MODULARES GEBÄUDESISTEM MIT EINHEITLICHER STAHLRAHMENSTRUKTUR

Title (fr)

SYSTÈME DE CONSTRUCTION MODULAIRE COMPLET AVEC UNE STRUCTURE À CHARPENTE EN ACIER UNIFORME

Publication

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Application

EP 23462005 A 20231019

Priority

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Abstract (en)

The subject of the invention is a complete modular building system with a uniform grid system steel frame structure consisting of modules that can be arranged next to each other or above each other, using an external thermal envelope consisting of corner elements from vertical and horizontal panels that satisfy different support structure requirements, different building energy requirements, connecting the columns and the support frame elements (corner) The final modular building system uses technology that connects the elements together with screws, uses the elements as a transport frame during transport to the site, provides space for mechanical and electrical installations, and uses technology that can even be varied afterwards along a predetermined grid. The steel frame system consists of floor (1), ceiling (5), closing slab (9) structures following a uniform module size and internal partition grid system, floor edge element (10), ceiling edge element (11), grid supports providing a common installation space between ceiling and floor (7), (6), as well as useful space corner column (3), installation space corner column (8) elements, where the structural elements are connected by floor (2), ceiling (4) corner elements, multi-storey module floor corner elements (35) in the case of a multi-storey building connected by screws, and at the same time serves as the basis for the external, thermal and vertical panels (16) with a uniform intermediate panel frame (17) and fixing system, which form an envelope for each building and are aligned to the grid of the frame structure of the building, satisfying the various building energy requirements, long horizontal panels (36), short horizontal panels (39), corner panels with frame structure (19) adapted to the module size at the module corners, corner panels (18), corner panel with frame structure (21), corner panels (20), external non-solid wall panel with frame structure (27) wall panels with external window installation (23), wall panels with external door installation (22), wall panels with external portal installation (24), as well as external corner sealing elements (30), external corner sealing elements (40); in addition, floor general (12), side wall (14), corner (15) and ceiling internal general (31), side wall (32), which are adapted to the grid system of the frame structure and are fastened with screws from the side of the useful space with the help of a fastening element (13), corner (33) elements; internal vertical partition columns (28), internal partition elements (25), double-length internal partition panel elements (37), triple-length door-mounted internal partition panel elements (38), internal partition element frame structures (26), aligned to external wall panel (34) to receive panels as well as partition starting elements (29). The assembly procedure of the transport module of the complete modular building system with a uniform grid system steel frame structure, which is the subject of the invention, which includes the method of assembly and use of the final support and space separating elements, which can be placed on top of and next to each other after the assembly process of the transport module and become part of the complete modular building system with a uniform grid system steel frame structure : floor structure (1), floor corner elements (2), floor edge elements (10), interior (general) floor elements (12), side wall floor elements (14), corner floor elements (15), floor and ceiling fixing elements (13), installation space corner posts (8) grid support (6), grid support (7). ceiling structure (5), ceiling edge elements (11), ceiling corner elements (4).

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- [X] KR 20130044574 A 20130503 - OH YEON SOO [KR]

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