

Title (en)
WALL CONSTRUCTION SYSTEM FOR BUILDING HOUSES, HAVING DRY CONSTRUCTION COMPOSITE COLUMNS OF STRUCTURAL STEEL AND CONCRETE

Title (de)
WANDBAUSYSTEM MIT TROCKENBAU-STAHLPROFIL-BETON-VERBUNDSTÜTZEN FÜR DEN HAUSBAU

Title (fr)
SYSTÈME DE CONSTRUCTION DE CLOISONS COMPRENANT DES MONTANTS DE LIAISON BÉTON-PROFILÉ EN ACIER DE CLOISONS SÈCHES POUR LA CONSTRUCTION DE MAISON

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Application
EP 17804049 A 20171016

Priority

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Abstract (en)

[origin: WO2018072777A1] 2.1. Composite columns permit high loads on small cross-sections. To ensure the functional connection, the steel sections have to be comparatively thick. This is incompatible with the use of dry construction technology using very small metal sheet thicknesses. Joining the in-filling wall members of exterior walls, usually brick or insulating elements, to a composite column is labour-intensive. The new wall construction system is designed to ensure structurally stable walls with a minimum of materials, simplify assembly and permit immediate dry lining.

2.2. Thin sheet steel sections (3) are arranged as composite columns in the modular grid perpendicularly in the wall plane and such that they engage the in-filling wall elements (8), have multiple lateral openings (5) for pourable concrete across their full height, and on the outermost part of the inner side have even locating surfaces (4) for building boards. Transverse to the wall the in-filling wall elements have undercuts and closely hug the steel section. Once the formwork for the connecting concrete slab (14) for the ceiling support has been established, the concrete for the support and slab are poured simultaneously to storey height. The poured concrete interlockingly ensures the functional connection with the steel sheet sections (3), which are anchored in the drywall locating surfaces (4) and at the same time secures the wall elements (8) to the composite columns (1).

2.3. This construction system makes it possible to produce outer and inner walls for buildings with predominantly solid ceilings at low cost and with clear separation of the different building trades, and further allows ready assembly of such walls by two people.

IPC 8 full level
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