

1/19 © EPODOC / EPO

- PN - [CA3162116](#) A1 20230214
- PR - CA20223162116 20220609
- AP - CA20223162116 20220609
- DT - *; Rep
- CCI - [E04C3/34](#) ; [E04C5/0604](#) ; [E04G13/02](#) ; [E04G17/04](#)
- CCA - [E02D5/34](#)
- CI - E04B1/00 (EP)
- E04B1/35 (EP)
- E04C3/34 (EP)
- E04C5/0604 (EP)
- E04G13/02 (EP)
- E04G17/04 (EP)
- CA - E02D5/34 (EP)
- PA - CAN AMERICAN CORRUGATING CO LTD [CA]
- TI - METHOD FOR ASSEMBLING A BUILDING USING **CONCRETE** COLUMNS
- AB - A **concrete** and steel insulated building is constructed by forming excavated holes and inserting into each hole a 3-dimensional **reinforcing** bar cage having a length so as to define **reinforcement** for a **pile** and to stand upwardly of the hole to a height above the hole to provide **reinforcement** for a column having a height of the building **wall**. The **pile** is formed by casting **concrete** into each hole around the cage and setting the material so as to define an upper surface of the **pile** at or above the ground. With the **pile** set, a formwork is defined by a series of stacked openable form components standing upwardly and a further body of **concrete** is cast into the formwork to form the column which is integrated with the **pile** by the cage. A roof and insulated walls are applied on the building supported by the columns.

2/19 © EPODOC / EPO

- PN - [CN217998366U](#) U 20221209
- PR - CN20222246933U 20220805
- AP - CN20222246933U 20220805
- DT - I
- PA - WUHAN SURVEYING GEOTECHNICAL RES INSTITUTE CO LTD OF MCC
- TI - Permanent and temporary combined basement structure
- AB - The utility model provides a permanent and temporary combined basement structure which sequentially comprises a basement structure body, a lining **wall** and an underground diaphragm **wall** from inside to outside, the lining **wall** is tightly connected with the underground diaphragm **wall** through a connecting structure, and top beams are arranged on the top of the lining **wall** and the top of the underground diaphragm **wall**. The basement structure comprises a structural column, a bottom plate, a floor slab, a **wall** body and one or two or more layers of superposed beams, a cast-in-situ bored **pile** is constructed at the bottom of the bottom plate of the basement, the structural column comprises a latticed column and a **reinforced concrete** thickening layer arranged outside the latticed column, the lower end of the structural column is fixed in the cast-in-situ bored **pile**, and the lower end of the structural column is fixed in the **reinforced concrete** thickening layer. The upper portion of the basement bottom plate sequentially penetrates through one layer or two layers or more than two layers of superposed beams and is fixedly connected

with the superposed beams, and the basement bottom plate and the two ends of each layer of superposed beams are respectively connected with the lining **wall** into a whole. The basement structure is good in overall performance, building materials are saved, the construction speed is high, and the basement structure has high application and popularization value.

3/19 © EPODOC / EPO

- PN - [CN216304908U](#) U 20220415
- PR - CN202122712378U 20211108
- AP - CN202122712378U 20211108
- DT - I
- PA - HAINAN HUAOUN STEEL STRUCTURE ENG COLTD
- TI - Novel steel structure and **concrete** combined structure
- AB - The utility model discloses a novel steel structure and **concrete** combined structure, which relates to the technical field of buildings and comprises a foundation layer and a ground **pile** fixedly arranged at the bottom end of the foundation layer. The steel structure main bodies are installed at the upper end of the foundation layer face, the upper **concrete** layer is arranged at the top end of each steel structure main body, the steel structure window bodies are installed in the steel structure main bodies, the **concrete wall** bodies are poured on the surfaces of the steel structure main bodies, and **reinforcing** connection mechanisms used for achieving the **reinforcing** connection effect are further arranged between the steel structure main bodies and the **concrete wall** bodies. According to the **reinforced** connecting structure, the contact area between the **concrete** and the steel structure can be increased through the arranged **reinforced** connecting mechanism, so that the connection between the **concrete** and the steel structure is firmer, and the strength and the stability of a building are enhanced.

4/19 © EPODOC / EPO

- PN - [CN215926061U](#) U 20220301
- PR - CN202121609942U 20210715
- AP - CN202121609942U 20210715
- DT - I
- PA - WAN YIXIU
- TI - **Reinforced concrete** wallboard **pile** laminated **wall** for reverse building method and core tube
- AB - The utility model discloses a **reinforced concrete** wallboard **pile** composite **wall** and core tube for a reverse building method, which comprises a wallboard **pile** and composite components, and the composite components are arranged on two sides of the wallboard **pile**. The utility model belongs to the technical field of constructional engineering, and aims to solve the problem that the number of constructable floors of an overground building is seriously restricted during reverse construction due to lower bearing capacity of a stand column **pile** in the conventional reverse construction method. The technical effects are achieved as follows: through the arrangement of the laminated assembly and the wallboard piles, the laminated **wall** adopts the wallboard piles as vertical support members during the reverse construction in the reverse construction method, while the wallboard piles are tightly combined with the structural core tube, the bearing capacity of the vertical members during the reverse construction is greatly improved, the number of floors which can be constructed on the ground during the reverse construction is

increased, and the construction cost is reduced. And the engineering construction period is shortened.

5/19 © EPODOC / EPO

- PN - [CN112482555](#) A 20210312
- PR - CN202011231207 20201106
- AP - CN202011231207 20201106
- DT - I
- CT - || STSE (A)
[CN103195087](#) A 20130710 [A] (CCFEB CIVIL ENGINEERING CO LTD)
[A] 1-5
* 全文 *;
[CN103981896](#) A 20140813 [A] (CHINA CONSTRUCTION 4TH ENG BUREAU 6TH CO LTD)
[A] 1-5
* 全文 *;
[KR20150044210](#) A 20150424 [A]
[A] 1-5
* 全文 *;
[CN105862873](#) A 20160817 [Y] (BEIJING FOURTH CONSTRUCTION AND ENG CO LTD)
[Y] 1-5
* 说明书第[0030]-[0035]段, 附图1-6 *;
[CN105926815](#) A 20160907 [A] (JIANGSU DONGSHENG XINCHENG CONSTRUCTION GROUP CO LTD)
[A] 1-5
* 全文 *;
[CN105971306](#) A 20160928 [Y] (ZHEJIANG CITY INVEST CONSTRUCTION CO LTD)
[Y] 1-5
* 说明书第[0017]-[0022]段, 附图1-3 *;
[CN107165266](#) A 20170915 [A] (CHINA MCC17 GROUP CO LTD)
[A] 1-5
* 全文 *;
[CN108532939](#) A 20180914 [A] (SHANGHAI BAOYE GROUP CORP LTD)
[A] 1-5
* 全文 *;
[CN111395745](#) A 20200710 [A] (CHINA CONSTR 4TH ENG DIVISION, et al)
[A] 1-5
* 全文 *
- CI - E02D27/01 (CN)
- E04B1/0007 (CN)
- E04B1/66 (CN)
- E04G11/08 (CN)
- E04G11/12 (CN)
- E04G17/14 (CN)
- PA - YCIH NO 6 CONSTRUCTION CO LTD
- TI - Shear **wall** structure and shear **wall** construction method
- AB - The invention discloses a shear **wall** structure and a shear **wall** construction method. The shear **wall** structure comprises a raft, wherein a foamed **concrete** layer is arranged on the raft, a plurality of reinforcing meshes are arranged in the foamed **concrete** layer, pull hooks are arranged at the **reinforcing** meshes, water stop screws are arranged in the foamed **concrete** layer, a waterproof layer is arranged on

one side of the foamed **concrete** layer, a basement outer **wall** is arranged on one side of the waterproof layer, a supporting **pile** is arranged on the other side of the foamed **concrete** layer, a formwork assembly is arranged on the raft, the formwork assembly comprises embedded steel pipes, a formwork, secondary edges, main edges and throwing supports. According to the shear **wall** structure, through the processes of popup of control lines, pre-burying of the bottom supporting point steel pipes, pre-burying of the pull hooks and the water stop screws, hanging of the **reinforcing** meshes, supporting of the formwork and pouring of the foamed **concrete**, stable supporting of the formwork is achieved in the pouring process, the shear **wall** can be used for construction when the construction interval is too small, the construction process is safer, and the built shear **wall** has qualified data in all aspects.

6/19 © EPODOC / EPO

- PN - [CN112049117](#) A 20201208
- PNFP - CN112049117B B 20220607
- PR - CN202010670345 20200713
- AP - CN202010670345 20200713
- DT - I
- CT - || STSE (A)
[CN205894086U](#) U 20170118 [A] (GUANGDONG ZHONGGONG ARCH DESIGN INST CO LTD)
[A] 1-9
* 全文 *;
[CN207878473U](#) U 20180918 [A] (BEIJING BUILDING MAT GEOTECHNICAL ENGINEERING CORPORATION, et al)
[A] 1-9
* 全文 *;
[CN209923935U](#) U 20200110 [A] (KUNMING SURVEY DESIGN AND RES INSTITUTE CO LTD OF CREEC)
[A] 1-9* 全文 *
- CTNP - || STSE (A)
[X] - 张群仲, "岩石地区基坑排桩支护新型式设计", 《工程建设与设计》
[X] 1-9
* 第3节 *
- CCA - [Y02A10/23](#)
- CI - E02D17/04 (CN)
- E02D29/045 (CN)
- E04B1/0007 (CN)
- CA - E02D2300/002 (CN)
- E02D2600/30 (CN)
- Y02A10/23 (EP)
- PA - (A)
CHINA RAILWAY MAJOR BRIDGE RECONNAISSANCE & DESIGN INST CO LTD
- TI - (A)
Soil-rock binary foundation pit supporting structure system
- AB - (A)
The invention belongs to the technical field of foundation pit engineering, and particularly relates to a soil-rock binary foundation pit supporting structure system. The soil-rock binary foundation pit supporting structure system comprises a soil

retaining structure and a plurality of anchor supporting members used for supporting the soil retaining structure. The soil retaining structure is an end-suspended **pile** or an end-suspended **wall**. The bottom of the soil retaining structure extends into a slightly-weathered rock stratum of a soil-rock binary foundation pit, no rock shoulder is fixedly embedded in the bottom of the soil retaining structure, and a **reinforcing** mesh sprayed **concrete** facing structure is arranged on the pit **wall** of the slightly-weathered rock stratum below the bottom face of the soil retaining structure. The bottom of the soil retaining structure extends into the slightly-weathered rock stratum, self-stabilization of the pit **wall** of the slightly-weathered rock stratum is fully utilized, the multiple anchor supporting members are combined, a safe and reliable supporting structure system is formed, no rock shoulder is fixedly embedded in the bottom of the soil retaining structure and pre-stressed anchor cable locking feet are not arranged at the bottom of the soil retaining structure, an outer contour line of the foundation pit is compact, the influence of occupied construction sites and earth excavation on the surrounding environment is reduced, working procedures are simplified, and meanwhile, the underground obstacle effect of locking foot pre-stressed anchor cables on the later underground space development is eliminated.

7/19 © EPODOC / EPO

- PN - [CN110777847](#) A 20200211
- PNFP - CN110777847B B 20210427
- PR - CN20191160030 20191101
- AP - CN20191160030 20191101
- DT - I
- CT - || STSE (A)
[JP2004052462](#) A 20040219 [A] (KYOYU KENSETSU KK)
 [A] 1-9
 * 全文 *;
[KR100633013B](#) B1 20061012 [A] (SMARTEC ENGINEERING CO LTD [KR])
 [A] 1-9
 * 全文 *;
[CN102852164](#) A 20130102 [A] (CHINA CONSTR 7TH ENG DIVISION)
 [A] 1-9
 * 全文 *;
[CN103835361](#) A 20140604 [A] (ZHONGTIAN CONSTR GROUP CO LTD)
 [A] 1-9
 * 全文 *;
[CN105735352](#) A 20160706 [A] (UNIV SHANDONG)
 [A] 1-9
 * 全文 *;
[CN209377188U](#) U 20190913 [A] (TAIZHOU PULIDE BUILDING TECH CO LTD)
 [A] 1-9
 * 全文 *;
[CN209468860U](#) U 20191008 [A] (ZHANG WEI)
 [A] 1-9
 * 全文 *;
[CN209523362U](#) U 20191022 [A] (SHANGHAI SONGFENG BUILDING NEW MAT CO LTD)
 [A] 1-9
 * 全文 *
- CI - E02D15/02 (CN)

	- E02D17/04 (CN)
	- E02D27/01 (CN)
	- E02D29/045 (CN)
	- E02D29/16 (CN)
	- E02D31/02 (CN)
	- E04B1/0007 (CN)
PA	- (A) SHENZHEN JIANAN GROUP CO LTD
TI	- (A) Basement exterior wall pouring and water proofing integrated structure and construction method at confined space
AB	- (A) The invention relates to the technical field of building engineering, in particular to a basement exterior wall pouring and water proofing integrated structure and construction method at a confined space. The basement exterior wall pouring and water proofing integrated structure at confined space comprises a basic raft plate, a basement exterior wall , a supporting pile , a connecting mechanism and a water proofing mechanism; the basement exterior wall is of a prefabricated reinforced concrete structure; the connecting mechanism comprises a shell, a first positioning rod, a second positioning rod and a fixing piece, wherein the first positioning rod is used for being inserted into a first positioning groove formed in the supporting pile , and the second positioning rod is used for being inserted into a second positioning groove formed in the outer side of the basement exterior wall ; the water proofing mechanism comprises a water dispersing plate and a baffle, one end of the water dispersing plate is connected with one end of the basic raft plate and is downwards inclined relative to the basic raft plate, and the other end of the water dispersing plate is connected with the baffle; and a groove is formed in the bottom end of the basement exterior wall , the baffle is used for being inserted into the groove, and a first water proofing rubber strip is arranged in the groove. The structure and method have the effects of short construction period and good water proofing effect.

8/19 © EPODOC / EPO

PN	- CN110593312 A 20191220
PR	- CN201910855993 20190911
AP	- CN201910855993 20190911
DT	- I
CT	- STSE (A) KR20090091473 A 20090828 [A] (KOLON CONSTRUCTION CO LTD [KR]) [A] 1-5 * 全文 *; CN201762710U U 20110316 [A] (CHINA JINGYE ENG CO LTD, et al) [A] 1-5 * 全文 *; CN203270610U U 20131106 [Y] (CN RAILWAY SIYUAN SURVEY & DES) [Y] 1-5 * 说明书具体实施方式部分 *; CN203741870U U 20140730 [A] (EAST CHINA ARCHITECTURAL DESIGN & RES INST CO LTD) [A] 1-5 * 全文 *; CN204590039U U 20150826 [A] (SHANGHAI GEOTECHNICAL INVESTIGATIONS &

DESIGN INST)

[A] 1-5

* 全文 *;

[CN204959763U](#) U 20160113 [A] (EAST CHINA ARCHITECTURAL DESIGN & RES INST CO LTD)

[A] 1-5

* 全文 *;

[CN105586975](#) A 20160518 [A] (JINAN RAIL TRANSIT GROUP CO LTD)

[A] 1-5

* 全文 *;

[CN107119695](#) A 20170901 [A] (SECOND CONSTR ENG CO LTD)

[A] 1-5

* 全文 *;

[CN207211188U](#) U 20180410 [A] (CHANGZHOU ARCHITECTURAL RES INSTITUTE GROUP CO LTD, et al)

[A] 1-5

* 全文 *;

[CN207469322U](#) U 20180608 [A] (CN RAILWAY SIYUAN SURVEY & DES)

[A] 1-5

* 全文 *;

[CN108570992](#) A 20180925 [Y] (CHINA RAILWAY NO 5 ENG GROUP, et al)

[Y] 1-5

* 说明书具体实施方式部分 *

- CI - E02D17/04 (CN)
- E02D29/05 (CN)
- E04B1/0007 (CN)
- CA - E02D2300/002 (CN)
- PA - UNIVNANTONG
- TI - Composite structure with bracing soldier piles and basement exterior **wall** overlapped and construction process of composite structure
- AB - The invention discloses a composite structure with bracing soldier piles and a basement exterior **wall** overlapped and a construction process of the composite structure. The bracing soldier piles are arranged in a column manner at equal intervals and are closely attached to the outer side of the basement exterior **wall**, after **concrete** is poured into the clearances between embedded horizontal **reinforcement** in **pile** bodies of the bracing soldier piles and the soldier piles, a continuous overall **pile wall** is formed, and a shear force groove is formed in the **pile wall**. After the surface of the **pile wall** is scabbled and cleaned up, the bracing soldier piles and the basement exterior **wall** are connected to form overlapped connection through the shear force groove in the **pile wall** and **reinforcement** connectors in the bracing soldier piles, and thus the composite structure for resisting external water and soil pressure together is formed. According to the composite structure, the horizontal stiffness and bending resistance of the bracing soldier piles can be fully utilized, the bracing soldier piles and the basement exterior **wall** are combined, so that a temporary bracing structure becomes one part of a permanent underground main structure, then stress of the basement exterior **wall** is relieved, the thickness of the basement exterior **wall** is reduced, the usable area of a basement is increased, and social resources are saved.

PR - CN201821754273U 20181029

AP - CN201821754273U 20181029

DT - I

PA - YU CAIMIN

TI - Canteen-in-canteen type large ancestral canteen

AB - The utility model discloses a lobby-in-lobby type large ancestral lobby. A foundation (1) of the lobby-in-lobby type large ancestral lobby is composed of a **pile** foundation (1-1), a **reinforced** concrete raft (1-2) and a circular raft type bearing platform (1-3). Wherein the ancestral hall functional body (3) is of a cylindrical full-**reinforced concrete** shear **wall** structure which is gradually shrunk from bottom to top in a stepped mode, and the functional body curtain **wall** (3-1), the hall-in-hall (3-2) and the like are arranged outside the core tube (2). The blessing core body (4) is provided with a blessing hall (4-1) and the like, and is externally provided with a core body curtain **wall** (4-3); the steel pipe net rack decorative supporting body (5) is composed of steel pipe net rack decorative supporting columns which are distributed in an annular mode and are bent and gradually shrunk, and the base (6) is in a step type and is composed of three steps. The Chinese surname culture propagating device is ingenious, attractive, capable of saving occupied area, high in wind pressure resistance, high in sedimentation resistance, high in anti-seismic level, stable and safe in structure, good in Chinese surname culture propagating effect and capable of integrating ancestral worship, music score renovation, music score renewal and traveling into a whole.

10/19 © EPODOC / EPO

PN - [CN208056104U](#) U 20181106

PR - CN201721779823U 20171215

AP - CN201721779823U 20171215

DT - I

PA - ZHUHAI HUAHAI REAL ESTATE CO LTD

TI - Basement

AB - The utility model belongs to the technical field of the **concrete** member technique and specifically relates to a basement, including cushion cap, **wall** post **reinforcing** bar and **wall** post, the **wall** post includes the post body and is located the **pile** cap on the post body, **wall** post **reinforcing** bar is located the **wall** post, and **wall** post **reinforcing** bar extends to in the **pile** cap at the bottom of the cushion cap, still include **concrete** floor and **concrete wall**, establish water drainage tank on the **concrete** floor, the **concrete wall** inboard sets firmly the second **wall** of taking the ponding chamber, be equipped with the layer that absorbs water on the chamber **wall** in ponding chamber, be equipped with in the **concrete** floor and place chamber and suction tube, and the ponding chamber with place chamber intercommunication, the lower part in ponding chamber is equipped with soft layer, the last catch bar that sets firmly of soft layer, establishing the piston in the suction tube, setting firmly the piston rod on the piston, the tip and the catch bar of piston rod correspond, be equipped with absorb water pipe and drain pipe on the suction tube, the effective ponding on absorbing soft layer that absorbs water, drain pipe and water drainage tank intercommunication, be equipped with reset spring between the section of thick bamboo **wall** of piston and suction tube. This scheme can reduce the waste and assurance water -proof effects of basement **reinforcing** bar.

11/19 © EPODOC / EPO

PN - [CN207032254U](#) U 20180223

PR - CN201720760134U 20170627

AP - CN201720760134U 20170627

DT - I

PA - CHINA CONSTR 2ND ENG BUREAU

TI - Operation support body that cancellation basement outer **wall** was backfilled

AB - The utility model relates to an operation support body that cancellation basement outer **wall** was backfilled, including several fender piles, several shapes of strutting the row of piles row suit with the foundation ditch appearance, is interval between an adjacent fender **pile** 2m 2.5m, and spray in one side that foundation ditch excavation posterior branch fender **pile** faces empty face between adjacent fender **pile** and have **concrete** -based layer no. 1, is the thickness on **concrete** -based layer no. 1 80mm 100mm, be equipped with **reinforcing** bar net piece no. 1 in the **concrete** -based layer no. 1, the outside of **reinforcing** bar net piece no. 1 still is equipped with external pressure stiffener net piece no. 1, be equipped with strengthening rib no. 1 on **reinforcing** bar net piece no. 1 and the external pressure stiffener net piece no. 1. The utility model discloses a can operation support body that cancellation basement outer **wall** was backfilled cancel the process of thoughtlessly congealing soil backfilling in traditional basement construction side method and enlarge 0.3 meter 1.2 the land use of rice basement girth or excavate 0.3 meter less 1.2 construction cost can be practiced thrift to the cubic metre of earth and stone of rice basement girth.

12/19 © EPODOC / EPO

PN - [CN206941572U](#) U 20180130

PR - CN201720576245U 20170523

AP - CN201720576245U 20170523

DT - I

PA - SHANGHAI CONSTRUCTION NO 1 GROUP CO LTD

TI - A post **pile** driving construction center pillar stake connected node

AB - The utility model discloses a post **pile** driving construction center pillar stake connected node, including bored **concrete pile** and tubular column, the bored **concrete pile** is formed by **concrete** placement, and inside is provided with the steel **reinforcement** cage, the tubular column includes insertion section, be provided with a plurality of cant chiseis that are listed as on insertion section's the outer **wall**, each row the cantilever end of cant chisei through vertical steel bar connection together, insertion section's tip is provided with the end support board, insertion section pass through **concrete** placement in in the steel **reinforcement** cage. Post stake connected node through setting up cant chisei and longitudinal **reinforcement**, makes post stake connected node firmly combine together, through setting up the end support board, can reach the bored **concrete pile** from the load of tubular column future smooth -goingly.

13/19 © EPODOC / EPO

PN - [CN107165294](#) A 20170915

PR - CN201710604818 20170724

AP - CN201710604818 20170724

DT - I

CT - || STSE (A)

[JP2002227188](#) A 20020814 [A] (MASUDA YORIKO)
 [A] 1-10
 * 全文 *;
[KR20090058919](#) A 20090610 [A] (DONG BU CONSTRUCT CO LTD [KR], et al)
 [A] 1-10
 * 全文 *;
[CN102561552](#) A 20120711 [A] (UNIV BEIJING TECHNOLOGY)
 [A] 1-10
 * 全文 *;
[CN102704592](#) A 20121003 [A] (UNIV BEIJING JIAOTONG)
 [A] 1-10
 * 全文 *;
[CN102704593](#) A 20121003 [A] (UNIV BEIJING TECHNOLOGY)
 [A] 1-10
 * 全文 *;
[CN102797301](#) A 20121128 [A] (NINGBO LONGSHAN ADVANCED MATERIALS CO LTD)
 [A] 1-10
 * 全文 *;
[CN202644752U](#) U 20130102 [A] (ZHAO ZHONGXING)
 [A] 1-10
 * 全文 *;
[CN103397696](#) A 20131120 [X] (WEIHAI CONSTRUCTION GROUP CO LTD)
 [X] 1-10
 * 说明书0015-0035段及附图1-15 *;
[CN103711233](#) A 20140409 [A] (UNIV BEIJING TECHNOLOGY)
 [A] 1-10
 * 全文 *;
[CN103883035](#) A 20140625 [A] (UNIV BEIJING TECHNOLOGY)
 [A] 1-10
 * 全文 *;
[CN203866966U](#) U 20141008 [A] (ZHEJIANG SOUTHEAST SPACEFRAME)
 [A] 1-10
 * 全文 *;
[CN104452749](#) A 20150325 [A] (HANGZHOU JIANGRUN TECHNOLOGY LTD CO)
 [A] 1-10
 * 全文 *;
[CN204282348U](#) U 20150422 [A] (ZHONGDA CONSTRUCTION CO LTD)
 [A] 1-10* 全文 *;
[CN205369583U](#) U 20160706 [A] (JINAN JIEYUAN NEW MAT CO LTD)
 [A] 1-10
 * 全文 *;
[CN206016309U](#) U 20170315 [A] (SHANDONG YUANBO BUILDING SCIENCE & TECH CO LTD)
 [A] 1-10
 * 全文 *

- | | |
|----|---|
| CI | - E04B1/00 (CN)
- E04B1/76 (CN)
- E04B2/58 (CN)
- E04G21/00 (CN)
- E04H9/021 (CN) |
| PA | - HUNANXINNENGJIANGMATFACTORY |
| TI | - Thermal-insulating shearing wall truss building system and construction method |

thereof

- AB - The invention relates to the technical field of buildings and provides a construction method of a thermal-insulating shearing **wall** truss building system. The construction method comprises steps as follows: steel tube columns are arranged on a foundation **reinforcement** component which is a foundation pad **reinforcement** component or a **pile** foundation **reinforcement** cage; a foundation beam **reinforcement** component is mounted and subjected to electric soldering after being in mortise connection with the steel pipe columns; a **wall** body structure and a beam **reinforcement** component are mounted, and the beam **reinforcement** component is connected with the **wall** structure and the steel tube columns and subjected to electric soldering after being in mortise connection with the steel tube columns; **concrete** is poured into the foundation **reinforcement** component; **concrete** is poured into the foundation beam **reinforcement** component; **concrete** is poured into the steel tube columns; **concrete** is poured into the beam **reinforcement** component; a composite floor slab is mounted and connected with the beam **reinforcement** component. The invention further provides a thermal-insulating shearing **wall** truss building system. The thermal-insulating shearing **wall** truss building system is constructed with the construction method of the thermal-insulating shearing **wall** truss building system and has better performance.

14/19 © EPODOC / EPO

- PN - [CN206486984U](#) U 20170912
- PR - CN201621160824U 20161101
- AP - CN201621160824U 20161101
- DT - I
- PA - TIAN YU
- TI - Steel structure and **reinforced concrete** combined structure
- AB - The utility model discloses a steel structure and **reinforced concrete** combined structure by upper **concrete** layer, steel construction resistance to compression heat preservation steel deck, steel structure body, the steel sash body, steel construction and **concrete** structure combination **wall** body layer, basic unit, the pre-buried layer of steel construction, foundation **concrete pile** cluster one-tenth, adopt steel construction and **concrete** structure combination **wall** body layer plant foundation **wall** body, can have the two advantage of steel construction and **reinforced concrete** structure concurrently, can greatly promote its comprehensive properties, it is big to have member rigidity, the fire prevention, the non-corrosibility can be good, has great antitorque and antidumping ability, the shock resistance is good, and steel structure body has light in weight, component ductility is good, increase headroom and usable floor area, simultaneously can shorten construction cycle, can improve construction speed, fire resistance,

15/19 © EPODOC / EPO

- PN - [CN107034876](#) A 20170811
- PR - CN201710366652 20170523
- AP - CN201710366652 20170523
- DT - I
- CT - || STSE (A)
[JP2009007745](#) A 20090115 [A] (SHIMIZU CONSTRUCTION CO LTD)
[A] 1-8

* 全文 *;

[JP2010106496](#) A 20100513 [A] (MITSUBISHI HEAVY IND LTD)

[A] 1-8

* 全文 *;

[CN102041806](#) A 20110504 [Y] (MCC TIANGONG CONSTR CO LTD)

[Y] 1-8

* 说明书0017-0025段及附图图1 *;

[CN203924044U](#) U 20141105 [A] (CHINA CONSTR 6TH ENG DIVISION)

[A] 1-8

* 全文 *;

[CN105887811](#) A 20160824 [Y] (SHENZHEN FUTIAN JIAN'AN CONSTRUCTION GROUP CO LTD)

[Y] 1-8

* 说明书0015、0018段及附图图1 *;

[CN206941572U](#) U 20180130 [R] (SHANGHAI CONSTRUCTION NO 1 GROUP CO LTD)

[R] 1-5* 权利要求1-5 *

- CI - E02D5/34 (CN)
- E04B1/0007 (CN)
- E04B1/41 (CN)
- E04B1/58 (CN)
- PA - SHANGHAI CONSTRUCTION NO 1 (GROUP) CO LTD
- TI - **Pile**-column connection joint applied to one-column-with-one-**pile** construction and construction method thereof
- AB - The invention discloses a **pile**-column connection joint applied to one-column-with-one-**pile** construction. The **pile**-column connection joint applied to one-column-with-one-**pile** construction comprises a cast-in-place **pile** and a tubular column. The cast-in-place **pile** is formed by pouring **concrete** and internally provided with a **reinforcing** steel bar cage. The tubular column comprises an insertion section. Multiple columns of male pins are arranged on the outer **wall** of the insertion section. The cantilever ends of each column of male pins are connected together through longitudinal **reinforcing** steel bars. An end bearing plate is arranged at the end of the insertion section. The insertion section is arranged in the **reinforcing** steel bar cage through **concrete** pouring. According to the **pile**-column connection joint, the male pins and the longitudinal **reinforcing** steel bars are arranged, so that **pile**-column connection joints are firmly combined together; and the end bearing plate is arranged, and therefore load from the tubular column can be smoothly transferred to the cast-in-place **pile**. Meanwhile, the invention further provides a construction method of the **pile**-column connection joint applied to one-column-with-one-**pile** construction. The **pile**-column connection joint applied to one-column-with-one-**pile** construction and the construction method have the beneficial effects of being simple in procedure, convenient to operate and high in construction efficiency.

16/19 © EPODOC / EPO

- PN - [KR101665909B](#) B1 20161017
- PR - KR20160019536 20160219
- AP - KR20160019536 20160219
- DT - I
- CT - || STSE (B1)
[JPH0892989](#) A 00000000 [];
[JP2008196212](#) A 00000000 [];
[KR100951097B](#) B1 00000000 []

- PA - SEJIN ENG & CONSTRUCTION CO LTD [KR]; HWANG GUE CHEAL [KR]
- TI - CIP COMPOSITE **WALL** STRUCTURE OF UNDERGROUND OUTER **WALL** WITH CIP RETAINING **WALL**
- AB - The present invention relates to a composite **wall** structure of an underground outer **wall** and a CIP **wall** which absorbs a lateral soil pressure between a slab of an underground structure without a reaction by a support point and a different adjacent slab when combining the CIP **wall**; and an underground outer **wall** to prevent displacement of the underground outer **wall** by the soil pressure to provide **reinforced** durability, sound insulation, sound absorption, and heat insulation properties. The composite **wall** structure of the underground outer **wall** and the CIP **wall** comprises: a CIP **wall** which is a temporary facility structure installed by a CIP technique which forms a peristyle **wall** by continuously constructing a **concrete pile** which is a type of a small-diameter **concrete pile** constructed by inserting an H-**pile** or a **reinforcing** bar net, and then filling **concrete** to prevent soil collapse of a soil pressure before an underground excavation when constructing a basement floor of a building; an underground outer **wall** which is a main facility underground structure installed and combined with the CIP **wall** after underground excavation to the inside of the CIP **wall**; a plurality of underground slabs horizontally installed in the underground outer **wall** to vertically divide a floor; and a soil pressure absorbing material inserted and installed between the CIP **wall** and the underground outer **wall** to elastically be deformed to absorb a lateral soil pressure between an underground slab without a reaction by a support point and a different adjacent underground slab.

17/19 © EPODOC / EPO

- PN - [CN106049539](#) A 20161026
- PR - CN201610404378 20160612
- AP - CN201610404378 20160612
- DT - I
- CT - || STSE (A)
[US3728835](#) A 19730424 [A] (MCMANUS I)
 [A] 1
 * 全文 *;
[CN101148910](#) A 20080326 [A] (QINGZONG CAI [CN])
 [A] 1
 * 全文 *
- CTNP - || STSE (A)
 [Y] - 冯宪伟,《做最好的装饰装修工程施工员》,中国建材工业出版社,(20141231)
 [Y] 1
 * 第87-90、118-127、167页 *
 [Y] - 邻水县中信建筑工程有限公司,《北川县林业局5个林业企业管护站;安昌林业综合管理业务用房;安昌、擂鼓、禹里苗圃基地;小寨子沟自然保护区大火地、蔡家坪保护站及片口自然保护区竹林沟保护站工程项目-标段施工招标文件》,(20121219)
 [Y] 1
 * 第四章“主要分部分项施工方案”第一、二、四、六、八-十一节 *
 [Y] - 陈鹏志等,《建筑施工手册》,吉林科学技术出版社,(20000731)
 [Y] 1
 * 第702-704、707、713、716-718、746-748页 *
 [Y] - 郝峻弘等,《房屋建筑学(第2版)》,清华大学出版社,(20151031)

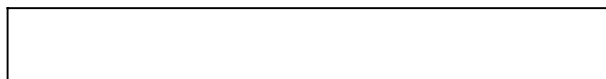
[Y] 1

* 第146-152页 *

- CI - E02D29/05 (CN)
- E02D31/02 (CN)
- E04B1/00 (CN)
- E04B1/0007 (CN)
- E04B2/02 (CN)
- E04D11/02 (CN)
- E04F15/02 (CN)
- E04F15/04 (CN)
- PA - JIANGSU YIAN CONSTRUCTION CO LTD
- TI - Building project construction method
- AB - The invention relates to a building project construction method. The building project construction method comprises the steps of measuring, paying off, construction of a **pile** foundation, construction of a foundation pit support, earthwork excavation, construction of a foundation under layer, bottom plate water prevention construction, construction of a basement formwork, binding of basement **reinforced** bars, basement **concrete** construction, basement external **wall** water prevention, segmental inspection and acceptance of subgrade and the foundation, earthwork backfilling, construction of a body structure, **wall** body laying, segmental inspection and acceptance of a main body, **wall** body plastering, external **wall** heat insulation, dry hanging of stones, constructions of **wall** face bricks, construction of building floor tiles, construction of laying of hardwood floors of a building floor, construction of building floor carpets, **wall** face emulsion paint coating, mounting of doors and windows, segmental inspection and acceptance of finishing and decorating, roof leveling blanket construction, roof slope construction, roof heat insulation layer construction, roof waterproof layer construction, construction of a polyvinyl chloride plastic thin film insulation layer, roof rigid layer construction, roof segmental inspection and acceptance, project pre-inspection and acceptance and project final inspection and acceptance. The construction steps are precise, the automation degree is high, and the construction efficiency is high.

18/19 © EPODOC / EPO

- PN - [NL8204230](#) A 19840601
- PR - NL19820004230 19821101
- AP - NL19820004230 19821101
- DT - *; Rep
- CCI - [E02D27/01](#) ; [E04B1/0007](#)
- CI - E02D27/01 (EP)
- E04B1/0007 (EP)
- PA - SCHOKBETON BV
- TI - Building construction system
on piles - places **wall** on **pile**
heads before installation
without using foundation
beam
- AB - The system constructs
buildings with side and end
walls, intermediate walls and



floors, founded on heated piles under the walls. Before installing one or more of the walls, this is placed directly on **pile** heads below without the use of a foundation beam, after which the floors are installed. Combined walls and foundation beams can be used, equipped with supports for floors, either prefabricated or cast in situ. The **pile** heads can each be formed by a prefabricated **reinforced concrete** ring, placed over the pipe top after the **reinforcing** components in the latter have been exposed. They are then secured together by pouring **concrete**.

19/19 © EPODOC / EPO

- PN - [CN1928274](#) A 20070314
- PNFP - CN100451254C C 20090114
- PR - CN20061047935 20060929
- AP - CN20061047935 20060929
- DT - I
- CT - || STSE (C)
[CN2130866Y](#) Y 19930428 [] (XINPING MA [CN]);
[JPH11247471](#) A 19990914 [] (YAMAHA CORP);
[JPH1046847](#) A 19980217 [] (SHINKO ELECTRIC CO LTD);
[CN2761757Y](#) Y 20060301 [] (ZHANG DONGCHUAN [CN])
- CCA - [Y02A30/00](#) ; [Y02B30/90](#)
- CA - Y02A30/00 (EP)
 - Y02B30/90 (EP)
- PA - (A)
 WEI HONGWEI [CN]
 - (C)
 HONGWEI WEI [CN]
- TI - (A C)
 Energy-saving anti-vibration house with frame made of benzene board
- AB - (A)
 The invention relates to a frame benzene plate energy-saving anti-shock room, containing foundation, which can be an isolated foundation, dug **pile** foundation in tunnel or prefabricated **pile** foundation, body with **concrete**, steel or wood frame, roofing and ground. The **wall** surfaced by benzene board combined together is set in frame. Spreading and setting network are accomplished on **wall** surfaced by benzene board, on which 0.5-1cm thick cement is set. The position of doors and windows mouth is strengthened and on the benzene board of roofing mat **reinforcement** is

configured, on which fin rock **concrete** with damp-proof course and color top coat sprayed is poured. The room in the invention adopts frame structure, strengthening body of benzene board and no tile so as to protect limited resource and make building easy and so on. Building is coated by benzene board in whole so as to realize energy-saving in real. Because of the light benzene board anti-shock performance is realized.