



New connection on: : 10-12-2021 : 23:34:47 - Last disconnection on: : 07-12-2021 : 20:08:33

V 4.0.0.128(LP,U,linux) (Rev:128 Tue Jan 12 07:45:53 2021 +0100 ((HEAD))) (RPM D202101)

Welcome to EPOQUE Rebuild under the Production Environment

[No database/cluster active] ..fiepodoc

 Database: EPODOC

[EPODOC: SS 1] floor and panel and glass and (fiber or fibre) and reinforcement and foam and plasticizer

Results in EPODOC 0

[SS 2] floor and panel

Results in EPODOC 49.812

[SS 3] 2 and foam

Results in EPODOC 901

[SS 4] 3 and /ic (E04F)

Results in EPODOC 290

[SS 5] 4 and OPD<=2017-11-03

Results in EPODOC 258

[SS 6] ..li 20-70



[SS 6] glass and (fiber or fibre)

Results in EPODOC 164.091

[SS 7] 2 and 6

Results in EPODOC 298

[SS 8] 7 and /ic (E04F)

Results in EPODOC 99

[SS 9] 8 and OPD<=2017-11-03

Results in EPODOC 84

[SS 10] 9 and foam

Results in EPODOC 9

[SS 11] ..li



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- PN - [CN206538973U](#) U 20171003
- PR - CN201720143493U 20170217
- AP - CN201720143493U 20170217
- DT - I
- PA - XUZHOU JIALIN WOOD IND CO LTD
- TI - Real wood composite **floor** is glued to zero aldehyde
- AB - The utility model discloses a real wood composite **floor** is glued to zero aldehyde, including wooden **floor** body, wooden **floor** body upper surface is compound through zero aldehyde glue film and **panel** layer, and wooden **floor** body lower surface is compound through zero aldehyde glue film and bottom plate layer, wooden **floor** body is the laminated wood layer, the bottom plate includes soft wood board layer, and polystyrene **foam** board layer complex is moulded through zero aldehyde glue film and fire -retardant section mould to soft wood board layer lower surface, and fire -retardant section mould is moulded the polystyrene **foam** board layer and is passed through zero aldehyde glue film and wood cortex complex through zero aldehyde glue film and **glass fiber** mesh cloth layer complex, **glass fiber** mesh cloth layer's lower surface, **panel** layer surface from bottom to up sets gradually water -base resin lacquer layer, waterborne ge lisi dope layer, UV and paints layer. The utility model discloses rational in infrastructure, the feature of environmental protection can be good, wear -resisting, fire -retardant, and the heat preservation effect is excellent.

2/9 © EPODOC / EPO

- PN - [CN206110609U](#) U 20170419
- PR - CN201621141380U 20161020
- AP - CN201621141380U 20161020
- DT - I
- PA - CHANG'AN UNIV
- TI - Moisture -proof environmental protection **floor**
- AB - The utility model discloses a moisture -proof environmental protection **floor**, and

comprises a base material, the last fixed surface of substrate is connected with the glue film that foams, on **foam** the last fixed surface of glue film and be connected with polyvinyl chloride **panel**, polyvinyl chloride **panel**'s last fixed surface is connected with the wearing layer, the upper surface integrated into one piece of wearing layer has evenly distributed's rubber protruding, the rubber arch is half circular, and the bellied surface of rubber is provided with anti -skidding screw thread, the lower fixed surface of substrate is connected with down the glue film that foams, the lower fixed surface of glue film of foaming down is connected with **glass fiber** board, **glass fiber** board's lower fixed surface is connected with the waterproof layer, the substrate is all connected through the mode of high temperature pressfitting between rather than the structure of both sides. The utility model discloses can make the **floor** have good anti -skidding effect, avoid the people to fall down, avoid appearing the accidental injury evil, it has lightened the weight on **floor** to disappear, still has good water -proof effects, makes the **floor** be difficult to damage, uses more comfortably in addition.

3/9 © EPODOC / EPO

- PN - [KR101267787B](#) B1 20130531
- PR - KR20110128859 20111205
- AP - KR20110128859 20111205
- DT - I
- CI - B61D17/041 (KR)
- B61D17/10 (KR)
- E04F15/02 (KR)
- E04F15/0215 (KR)
- E04F15/107 (KR)
- E04F15/18 (KR)
- PA - KRRI [KR]
- TI - **FLOOR** STRUCTURE FOR RAILWAY VEHICLES USED CERAMIC **FOAM** BOARD
- AB - PURPOSE: A **floor** structure for a railway vehicle using a foamed ceramic board is provided to minimize damage due to a fire by interposing a foamed ceramic board on the **floor** of a railway vehicle to increase fire resistance. CONSTITUTION: A **floor** structure for a railway vehicle using a foamed ceramic board comprises a keystone plate(100), a foamed ceramic board(110), an insulation part(150), a woven **glass fiber** (160), a second aluminum **panel**(140), a first aluminum **panel**(120), and a cover member (130). The keystone plate forms a base frame of the **floor** of a railway vehicle. The foamed ceramic board is arranged above the keystone plate. The insulation part is arranged between the keystone plate and the foamed ceramic board, and is composed of a **glass fiber** or a mineral **fiber**. The woven **glass fiber** is arranged between the foamed ceramic board and the insulation part. The second aluminum **panel** is arranged between the woven **glass fiber** and the insulation part. The first aluminum **panel** is attached to the upside of the foamed ceramic board.

4/9 © EPODOC / EPO

- PN - [KR101170016B](#) B1 20120801
- PR - KR20110041427 20110502
- AP - KR20110041427 20110502

DT - I

CI - E04C2/525 (KR)
- E04F15/02188 (KR)
- E04F15/182 (KR)
- E04F15/20 (KR)
- F24D3/142 (KR)

CA - E04F2290/023 (KR)

PA - ADDWELLBEING TECH CO LTD [KR]

TI - Semi-dry heating **panel** for preventing crack in a bathroom

AB - PURPOSE: A heating **panel** for a semidry bathroom is provided to prevent cracks by increasing resistance against thermal stress and external loads. CONSTITUTION: A heating **panel** for a semidry bathroom comprises a heating coil(110), a hot water **panel** (120), and a heat medium layer(130). The heating coil comprises an inlet port(111) and an outlet port(112). The hot water **panel** comprises a urethane **foam** layer(122), a radiating plate(123), an anti-breakage member(124), and a **glass fiber** mesh(125). The urethane **foam** layer is installed on a **floor** slab(1), and the heating coil is provided in a mounting groove(121) of the urethane **foam** layer. The radiating plate installed on the urethane **foam** layer and emits heat from the heating coil. The heating coil is fixed with an aluminum tape(126), and is closely attached to a lower surface of the radiating plate. The anti-breakage member is made of polyethylene. **Glass fiber** rods are horizontally and vertically placed on the anti-breakage member, and a **glass fiber** mesh is formed. The heat medium layer is formed on the hot water **panel**.

5/9 © EPODOC / EPO

PN - [EP2397322](#) A2 20111221

PNFP - EP2397322 A3 20160706
- EP2397322 B1 20180822

PR - DE20102009284U 20100618

AP - EP20110004929 20110616

DT - **

CT - || STSE (A3)
[DE3209520](#) A1 19830929 [YA] (CARL HEINZ ING GRAD)
[Y] 1-5,8,11,12,14
* page 7, lines 6-20; figures 1,2 *
[A] 9,10,13,15,16;
[DE2814004](#) A1 19791011 [YA] (WOERMANN BAUCHEMIE HOLDING AG)
[Y] 1-8,11,12,14
* page 11, paragraph letzter - page 12, paragraph zweiter; figure 1 *
[A] 9,10,13,15,16;
[XP002755927](#) A[Y];
[EP0666383](#) A1 19950809 [Y] (STEINER MARTIN [AT])
[Y] 8,11,12
* column 3, line 51 - column 4, line 26; figures 1,2 *;
[AT6507U](#) U1 20031125 [A] (BUEHRINGER WOLFGANG [AT])
[A] 1-15
* the whole document *;

	US2010010139 A1 20100114 [A] (DAVIDOVITS JOSEPH [FR], et al) [A] 1-15 * the whole document *; DE29620051U U1 19970417 [A] (BIEDERMANN JUTTA [DE], et al) [A] 1-15 * the whole document *
CTNP	- STSE (A3) [Y] - Anonymous, "VDB-Information", no. 87/01, (20011201), Verband Deutscher Betoningenieure E. V., URL: http://www.betoningenieure.de/Downloads/info87_01.pdf, (20160330), XP002755927 [Y] 1-8,11,12,14 * the whole document *
CCI	- B32B3/08 ; B32B5/18 ; B32B5/24 ; B32B5/26 ; B32B13/04 ; E04C2/525 ; E04F15/02 ; F24D3/142 ; F24F5/0089 ; F24F5/0092
CCA	- E04F2290/023 ; Y02B30/00
CI	- B32B3/08 (EP) - B32B5/18 (EP) - B32B5/24 (EP) - B32B5/26 (EP) - B32B13/04 (EP) - E04C2/525 (EP) - E04F15/02 (EP) - F24D3/142 (EP) - F24F5/0089 (EP) - F24F5/0092 (EP)
CA	- E04F2290/023 (EP) - Y02B30/00 (EP)
PA	- (A2 A3) PLAN GMBH M [DE] - (B1) SANHA GMBH & CO KG [DE]
TI	- (A2 A3 B1) Construction board with embedded pipeline conduit for a heating or cooling fluid
AB	- (A2) The panel (100) has a pipe line (2) with hot or cold fluid for space heating or cooling while mounting on a wall, a ceiling or a floor. A core layer (1) consists of a foam glass plate, and a reinforcing layer (6) made of a fiber glass mat is provided at a rear side of the core layer. The pipe line partially lies at a front side of the core layer or partially embedded on an outer surface of the front side of the core layer. The pipe line is provided with metal selected from corrosion-free steel and copper, and is formed as a connecting pipe.
6/9	© EPODOC / EPO
PN	- JPH0359263 A 19910314
PNFP	- JP2815181B B2 19981027

PR - JP19890193249 19890726

AP - JP19890193249 19890726

DT - I

FI - E04F15/18&L; E04F15/18&601D; E04F15/18&601G; E04F15/18&601Z; E04F15/20

FT - 2E220/AA19; 2E220/AA23; 2E220/AA35; 2E220/AA51; 2E220/AA55; 2E220/AB06;
2E220/AC01; 2E220/BC04; 2E220/GA02X; 2E220/GA22X; 2E220/GA25X; 2E220/GA27X;
2E220/GA33X; 2E220/GB01X; 2E220/GB28X; 2E220/GB32X; 2E220/GB43X;
2E220/GB45X; 2E220/GB48X

PA - (A)
BRIDGESTONE CORP

TI - (A)
FLOOR STRUCTURE

AB - (A)
PURPOSE: To improve the **floor** shock sound insulating property by removing part of a **floor** material at a preset interval to form a space section, and mounting a damper stuck with a steel plate or the like as an additional weight on one face of a soft spring material. CONSTITUTION: A **floor** material 2 is formed with a surface material 3 made of a relatively hard material such as wooden plywood or a plastic **panel** and a back material 4 made of an porous **fiber** plate such as a hard **foam** body or **glass** wool, and it is directly packed in a **floor** substrate 1. An additional weight 7 such as a steel plate or a cement plate is stuck on one face of a spring material 6 made of soft **foam** resin or rubber to form a dynamic damper 8. A space section 5 is formed in part of the back material 4, and the dynamic damper 8 is mounted on a **floor** substrate 1 in the inner space 5. The construction of a **floor** structure is facilitated, and the shock cutoff performance can be improved.

7/9 © EPODOC / EPO

PN - [JP2000220248](#) A 20000808

PR - JP19990023337 19990201

AP - JP19990023337 19990201

DT - I

FI - B32B5/16; B32B5/24&101; B32B5/28&Z; E04B1/00&501M; E04C2/20&N; E04C2/24&R;
E04F15/10&104A

FT - 2E162/CD02; 2E162/CD05; 2E162/FA13; 2E162/FB03; 2E162/FD05; 2E220/AA02;
2E220/AA03; 2E220/AA11; 2E220/AA14; 2E220/AA16; 2E220/AA51; 2E220/AB04;
2E220/BA01; 2E220/EA02; 2E220/EA03; 2E220/EA04; 2E220/FA01; 2E220/FA05;
2E220/GA02X; 2E220/GA12X; 2E220/GA22X; 2E220/GA25X; 2E220/GA27X;
2E220/GA30X; 2E220/GB01X; 2E220/GB11X; 2E220/GB12X; 2E220/GB28X;
2E220/GB32X; 2E220/GB37X; 2E220/GB38X; 4F100/AA19; 4F100/AG00; 4F100/AK51;
4F100/BA03; 4F100/BA10A; 4F100/BA10B; 4F100/DE04C; 4F100/DG01; 4F100/DH02A;
4F100/DJ01B; 4F100/GB07; 4F100/JJ01C; 4F100/JK06; 4F100/JL11C; 4F100/YY00C

PA - TOYO CHEMICALS CO LTD

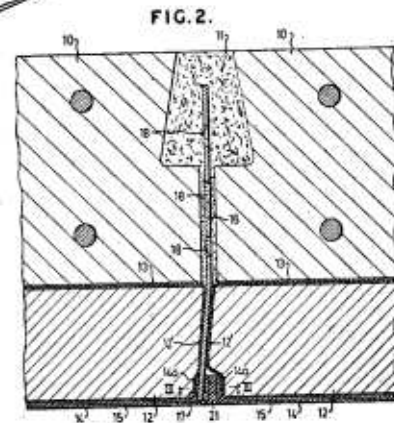
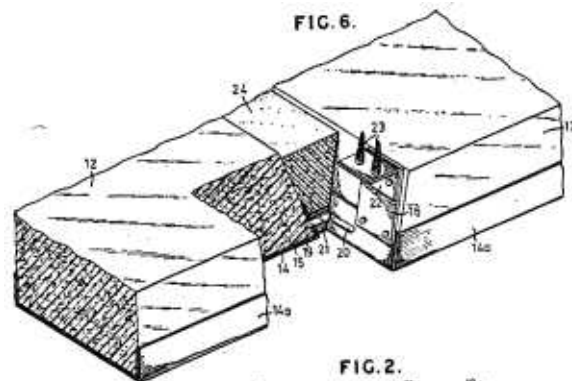
TI - **FLOOR** PANEL

AB - PROBLEM TO BE SOLVED: To strengthen the **floor** face more than the other parts and prevent separation between a **floor** face forming member and a heat insulating material

due to deterioration with the lapse of time by interposing spherical bodies which have specified mean particle diameter and are formed by a specified heat insulating member between a surface **panel** made of a **fiber** reinforced synthetic resin and a **foam** stacked at the back. SOLUTION: In a **floor panel** including a surface **panel** made of a FRP (**fiber** reinforced synthetic resin) and a **foam** body stacked at the back of the surface **panel** such as urethane **foam** resin, epoxy resin or the like, spherical bodies with the main particle diameter of 1.0-5.0 mm are interposed between the surface **panel** and the **foam** body. The spherical bodies are formed by a heat insulating member such as **glass** having adhesion to FRP and the **foam** body, urethane resin, aluminum oxide or the like, and adhesion is brought between the surface **panel** and the **foam** body by uniform anchor effect. A plurality of **floor** panels are continuously spread all over to form a veranda or balcony with good drainage without separation between the **panel** surface and the internal heat insulating material.

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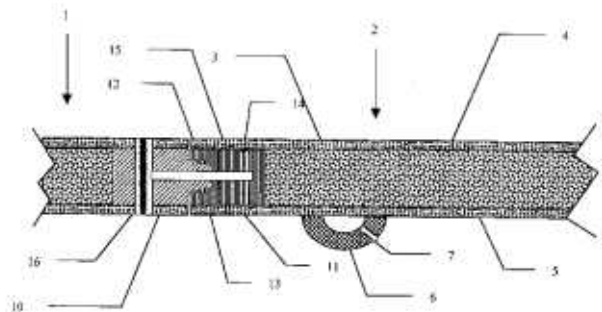
- PN - [GB1023611](#) A 19660323
- PR - SE19620000812 19620125
- AP - GB19630003065 19630124
- DT - **
- CCI - [E04B1/76](#) ; [E04F13/08](#) ;
[E04F13/0842](#)
- CCA - [Y02A30/244](#)
- CI - E04B1/76 (EP)
- E04F13/08 (EP)
- E04F13/0842 (EP)
- CA - Y02A30/244 (EP)
- PA - OSTERLIND & SON AB
- TI - Improvements in or relating to surface coated wall, ceiling or **floor** structures
- AB - 1,023,611. Heat and sound insulating walls. OSTERLIND & SON A.B. Jan. 24, 1963 [Jan. 25, 1962], No. 3065/63. Heading E1V. [Also in Divisions B7, F2 and F4] A wall, ceiling or **floor** supporting structure 10, of concrete, stone, wood, metal or plastic, has on at least one side a **panel** 14 divided into sections and adhered to a sound and heat insulating layer 12 of **glass** or mineral wool, paper, cork or plastic material, the **panel** being anchored to the structure by flexible or hinged tongues 16 of



sound and heat insulating material. The tongues 16, which may be of polyethylene reinforced with fabric or **glass fibre**, are riveted to inturned flanges 14a of the panels and are perforated as at 18 to increase the bond of a jointing composition 11 between the structures 10. The insulating layer 12 is covered with polyethylene foil which adheres to the **panel** 14 and structure 10 through bitumen layers 15, 13. The interstices between the panels 14 are sealed with a gas- and liquidtight putty 21; transversely directed tongues 19 interpenetrate slots 20 in the adjacent flanges to locate the panels and allow for thermal expansion. In a second embodiment, Fig. 6, the tongues 16 are riveted to angles 22 secured to the structure by screws or nails 23 and the V-shaped joints between the insulating layers 12 are sealed with soft **foam** plastic 24 and putty 21.

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PN - [FR2793508](#) A1 20001117
 PNFP - FR2793508 B1 20010727
 PR - FR19990006112 19990512
 AP - FR19990006112 19990512
 DT - *; Rep
 CT - || STSE (A1)
[EP0874105](#) A1 19981028
 [XA] (MONDO SPA [IT])
 [X] 1,7,10,13
 * column 2, line 13 - column 8,
 line 20; figures 1-3 *
 [A] 8,9,11,12;
[FR1537768](#) A 19680830
 [XA] (FRAPART)
 [X] 1,7,10



* page 1, column L, line 26 -
 page 2, column R, line 5;
 figures 1,2 *
 [A] 9,12

- CCI - [E04F15/225](#)
- CI - E04F15/225 (EP)
- PA - (A1 B1)
 DURAND LOIC [FR]
- TI - (A1)
Floor for dance or sporting events has panels with cellular or **foam** cores sandwiched between **fibre**, plywood or aluminium skins
- AB - (A1)
 The **floor** is made up of a series of linked panels (1, 2), each having upper and lower skins (4, 5) and a cellular core (3) between them. The skins can be of **glass** or carbon **fibre**, plywood or aluminium between 0.5 and 4 mm thick. The core is 8 - 30 mm thick and can be of a honeycomb material with cells lying perpendicular to the skins, of a plastic **foam**, or of balsa wood with layers perpendicular to the skins. Each **panel**'s core is surrounded by a frame (10, 11) of wood or plastic with fastenings, and the underside of each **panel** has studs (6) of an elastic material, each with an inner cavity connected to the outside through a calibrated hole (7).

[SS 11] ..li ss 9 10-60



PN - [US2018135313](#) A1 20180517

PR - US201715785971
20171017; US201662408998P
20161017

AP - US201715785971 20171017

DT - **

CCI - [B32B3/06](#) ; [B32B3/28](#) ;
[B32B3/30](#) ; [B32B5/02](#) ;
[B32B5/10](#) ; [B32B5/12](#) ;
[B32B7/02](#) ; [B32B9/005](#) ;
[B32B27/08](#) ; [B32B27/12](#) ;
[B32B27/20](#) ; [B32B27/22](#) ;
[B32B27/30](#) ; [B32B27/304](#) ;
[B32B27/32](#) ; [C08K5/0016](#) ;
[C09D127/06](#) ; [E04F15/02038](#) ;
[E04F15/105](#) ; [E04F15/107](#)

CCA - [B32B2250/03](#) ; [B32B2250/04](#) ;
[B32B2250/05](#) ; [B32B2255/02](#) ;
[B32B2255/26](#) ; [B32B2262/101](#) ;
[B32B2264/102](#) ; [B32B2264/108](#) ;
[B32B2307/406](#) ; [B32B2307/412](#) ;
[B32B2307/546](#) ; [B32B2307/554](#) ;
[B32B2307/582](#) ; [B32B2307/584](#) ;
[B32B2307/714](#) ; [B32B2307/732](#) ;
[B32B2307/734](#) ; [B32B2307/744](#) ;
[B32B2471/00](#) ; [B32B2607/00](#) ;
[B32B2607/02](#) ; [C08K5/01](#) ;
[C08K5/09](#) ; [C08K5/098](#) ;
[C08K5/101](#) ; [E04F2201/0107](#) ;
[E04F2201/023](#) ; [E04F2201/043](#) ;
[E04F2203/08](#)

CI - B32B3/06 (EP, US)
B32B3/28 (EP)
B32B3/30 (EP)
B32B5/02 (EP)
B32B5/028 (US)
B32B5/10 (EP)
B32B5/12 (EP)
B32B7/02 (EP)
B32B9/005 (EP)
B32B27/08 (EP, US)
B32B27/12 (EP, US)
B32B27/20 (EP, US)
B32B27/22 (EP, US)
B32B27/30 (EP)
B32B27/304 (EP, US)

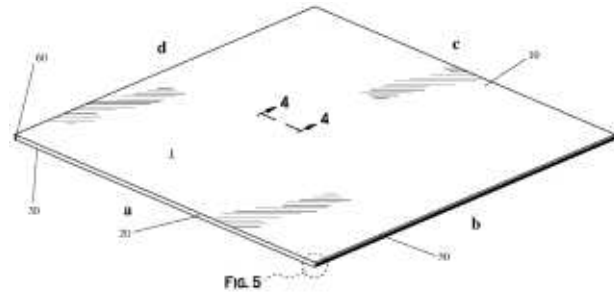


FIG. 1

	- B32B27/32 (EP)
	- C08K5/0016 (EP)
	- C09D127/06 (EP, US)
	- E04F15/02038 (EP, US)
	- E04F15/105 (EP)
	- E04F15/107 (EP, US)
CA	- B32B2250/03 (EP)
	- B32B2250/04 (EP)
	- B32B2250/05 (EP)
	- B32B2255/02 (EP)
	- B32B2255/26 (EP)
	- B32B2262/101 (EP, US)
	- B32B2264/102 (EP)
	- B32B2264/108 (EP)
	- B32B2307/3065 (US)
	- B32B2307/308 (US)
	- B32B2307/406 (EP)
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	- B32B2307/744 (EP)
	- B32B2471/00 (EP, US)
	- B32B2607/00 (EP)
	- B32B2607/02 (EP)
	- C08K5/01 (EP, US)
	- C08K5/09 (EP, US)
	- C08K5/098 (EP, US)
	- C08K5/101 (EP, US)
	- C08K11/00 (US)
	- E04F2201/0107 (EP, US)
	- E04F2201/023 (EP, US)
	- E04F2201/043 (EP, US)
	- E04F2203/08 (EP, US)
PA	- NOVALIS HOLDINGS LTD [HK]
TI	- Dimensionally Stable Floor Panel
AB	- A floor panel is provided. The floor panel composition includes a wear layer and a base layer. The base layer includes a

11/84 © EPODOC / EPO

PN - [WO2018073645](#) A2 20180426

PNFP - WO2018073645 A3 20180614

PR - US201662408998P 20161017

AP - WO20171B01413 20171017

DT - *; Rep

CT - |CN| ISR (A3)
[CN105604298](#) A 20160525
[Y] (ZHEJIANG HAILIDE NEW MAT
CO LTD)
[Y] 1-29
* paragraphs 0010-0038 and
figures 1 and 2 *;
[CN103741930](#) A 20140423
[Y] (JIANGSU BEIER DECORATION
MATERIAL CO LTD)
[Y] 1-29
* paragraphs 0016-0021 and
figure 1 *;
[CN105178561](#) A 20151223
[Y] (ZHEJIANG JINGTONG
PLASTICS CO LTD)
[Y] 1-29
* paragraphs 0019-0026 and
figure 1 *;
[CN104428475](#) A 20150318
[A] (UNILIN BVBA)
[A] 1-29
* the whole document *;
[CN105500836](#) A 20160420
[A] (ZHEJIANG KAMAN RUBBER
FLOOR CO LTD)
[A] 1-29
* the whole document *;
[JPS565727](#) A 19810121
[A] (DAINIPPON PRINTING CO



LTD)

[A] 1-29

* the whole document *

CCI

- [B32B3/06](#) ; [B32B3/28](#) ;
[B32B3/30](#) ; [B32B5/02](#) ;
[B32B5/10](#) ; [B32B5/12](#) ;
[B32B7/02](#) ; [B32B9/005](#) ;
[B32B27/08](#) ; [B32B27/12](#) ;
[B32B27/20](#) ; [B32B27/22](#) ;
[B32B27/30](#) ; [B32B27/304](#) ;
[B32B27/32](#) ; [C08K5/0016](#) ;
[C09D127/06](#) ; [E04F15/02038](#) ;
[E04F15/105](#) ; [E04F15/107](#)

CCA

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[B32B2250/05](#) ; [B32B2255/02](#) ;
[B32B2255/26](#) ; [B32B2262/101](#) ;
[B32B2264/102](#) ; [B32B2264/108](#) ;
[B32B2307/406](#) ; [B32B2307/412](#) ;
[B32B2307/546](#) ; [B32B2307/554](#) ;
[B32B2307/582](#) ; [B32B2307/584](#) ;
[B32B2307/714](#) ; [B32B2307/732](#) ;
[B32B2307/734](#) ; [B32B2307/744](#) ;
[B32B2471/00](#) ; [B32B2607/00](#) ;
[B32B2607/02](#) ; [C08K5/01](#) ;
[C08K5/09](#) ; [C08K5/098](#) ;
[C08K5/101](#) ; [E04F2201/0107](#) ;
[E04F2201/023](#) ; [E04F2201/043](#) ;
[E04F2203/08](#)

CI

- B32B3/06 (EP, US)
- B32B3/28 (EP)
- B32B3/30 (EP)
- B32B5/02 (EP)
- B32B5/028 (US)
- B32B5/10 (EP)
- B32B5/12 (EP)
- B32B7/02 (EP)
- B32B9/005 (EP)
- B32B27/08 (EP, US)
- B32B27/12 (EP, US)
- B32B27/20 (EP, US)
- B32B27/22 (EP, US)
- B32B27/30 (EP)
- B32B27/304 (EP, US)
- B32B27/32 (EP)
- C08K5/0016 (EP)
- C09D127/06 (EP, US)

CA	- E04F15/02038 (EP, US)
	- E04F15/105 (EP)
	- E04F15/107 (EP, US)
	- B32B2250/03 (EP)
	- B32B2250/04 (EP)
	- B32B2250/05 (EP)
	- B32B2255/02 (EP)
	- B32B2255/26 (EP)
	- B32B2262/101 (EP, US)
	- B32B2264/102 (EP)
	- B32B2264/108 (EP)
	- B32B2307/3065 (US)
	- B32B2307/308 (US)
	- B32B2307/406 (EP)
	- B32B2307/412 (EP)
	- B32B2307/546 (EP)
	- B32B2307/554 (EP)
	- B32B2307/582 (EP)
	- B32B2307/584 (EP)
	- B32B2307/714 (EP)
	- B32B2307/732 (EP)
	- B32B2307/734 (EP)
	- B32B2307/744 (EP)
	- B32B2471/00 (EP, US)
	- B32B2607/00 (EP)
	- B32B2607/02 (EP)
	- C08K5/01 (EP, US)
	- C08K5/09 (EP, US)
	- C08K5/098 (EP, US)
	- C08K5/101 (EP, US)
	- C08K11/00 (US)
	- E04F2201/0107 (EP, US)
	- E04F2201/023 (EP, US)
	- E04F2201/043 (EP, US)
	- E04F2203/08 (EP, US)
PA	- (A2 A3) NOVALIS HOLDING LTD [CN]
TI	- (A2 A3) ADIMENSIONALLYSTABLE FLOOR PANEL
AB	- (A2) A floor panel is provided. The floor panel composition includes a wear layer and a base

layer. The base layer includes a first base sections having a first composition of polyvinyl chloride, filler, and plasticizer, a second base sections having a second composition with a higher content of polyvinyl and plasticizer than the first composition, and a **glass fiber** section positioned between the first base section and the second base section.

- (A3)

A **floor panel** is provided. The **floor panel** composition includes a wear layer (14) and a base layer. The base layer includes first base sections (22) having a first composition of polyvinyl chloride, filler, and plasticizer, second base sections (24) having a second composition with a higher content of polyvinyl and plasticizer than the first composition, and a **glass fiber** section (28) positioned between the first base section and the second base section.

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PN - [CN207160496U](#) U 20180330

PR - CN201720646780U 20170606

AP - CN201720646780U 20170606

DT - I

PA - DER FUTURE TECH HOLDING GROUP CO LTD

TI - Cladding has **floor** film's waterproof wear -resisting flooring board

AB - The utility model provides a cladding has **floor** film's waterproof wear -resisting flooring board, package rubbing board material body, silica crystal layer and wear -resisting UV overlay coating, the top of **panel** body is provided with **glass fiber** reinforcement and moulds the layer, and the top that **glass fiber** reinforcement moulded the layer is provided with the waterproof layer, the silica crystal layer sets up at the top of waterproof layer, and the top of silica crystal layer is provided with **floor** film, the bottom of **panel** body is provided with **fibre** layers, and **fibre** layers's bottom is provided with moisture -proof priming paint layer, wear -resisting UV overlay coating sets up the bottom at moisture -proof priming paint layer. The utility model discloses a waterproof layer and moisture -proof priming paint layer's cooperation is used for this

flooring board's top and bottom all have dampproofing and waterproofing's effect, use through **fibre** layers's cooperation, make this flooring board have the moisture absorption protection against the tide, and anticorrosive mothproof effect is used through silica crystal layer and **floor** film's cooperation, makes this flooring board more wear -resisting, and waterproof mothproof, and safety ring protects.

13/84 © EPODOC / EPO

PN - [WO2018087637](#) A1 20180517

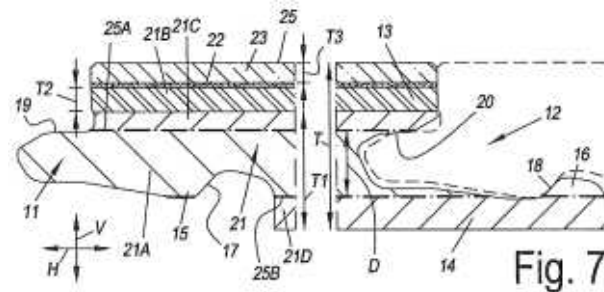
PR - US201662420094P
20161110; BE20160005868
20161122

AP - WO20171856855 20171103

DT - **

CT - |EP| ISR (A1)
[WO2015170274](#) A1 20151112
[X] (BERRYALLO NV [BE])
[X] 1-21,25-32,34
* page 12, paragraph 3; figures
1, 2 *
* page 16, paragraph 1 *
* page 17, paragraph last -
page 18, paragraph first *;
[WO2016001859](#) A1 20160107
[XI] (UNILIN BVBA [BE])
[X] 1-12,14-17,20-23,25-33
* page 3, lines 26-29; figure 3 *
* page 4, lines 6-12, 27-31 *
* figures 2, 5 *
[I] 24;
[WO2016016864](#) A1 20160204
[XY] (UNILIN BVBA [BE])
[X] 1-11,20,21,25-32
* page 8, lines 3-5, 18; figure 2 *
* page 13, lines 10-26 *
[Y] 35-40;
[DE102005021662](#) A1 20061116
[Y] (SCHULTE JOHANNES [DE], et
al)
[Y] 35-40
* paragraphs [0017] , [0 18];
figure 1 *

CCI - [B29D99/0057](#) ; [B32B3/06](#) ;
[B32B5/022](#) ; [B32B5/028](#) ;
[B32B5/18](#) ; [B32B7/12](#) ;
[B32B9/02](#) ; [B32B9/045](#) ;
[B32B25/08](#) ; [B32B27/065](#) ;
[B32B27/12](#) ; [B32B27/20](#) ;
[B32B27/22](#) ; [B32B27/304](#) ;



- CCA
- [B32B27/32](#) ; [B32B27/36](#) ;
 - [B32B27/40](#) ; [B32B29/005](#) ;
 - [E04F15/105](#) ; [E04F15/107](#)
 - [B32B2255/10](#) ; [B32B2260/021](#) ;
 - [B32B2260/028](#) ; [B32B2260/046](#) ;
 - [B32B2262/101](#) ;
 - [B32B2264/0242](#) ;
 - [B32B2264/067](#) ; [B32B2264/102](#) ;
 - [B32B2264/107](#) ; [B32B2264/108](#) ;
 - [B32B2266/0235](#) ;
 - [B32B2266/025](#) ; [B32B2307/102](#) ;
 - [B32B2307/412](#) ; [B32B2307/51](#) ;
 - [B32B2307/546](#) ; [B32B2307/554](#) ;
 - [B32B2307/718](#) ; [B32B2307/72](#) ;
 - [B32B2419/04](#) ; [B32B2471/00](#) ;
 - [B32B2607/00](#) ; [E04F2201/0146](#) ;
 - [E04F2201/0153](#) ;
 - [E04F2201/0552](#) ; [E04F2290/042](#)
- CI
- B29C70/08 (EP, EA, US)
 - B29C70/086 (US)
 - B29D99/0057 (EP)
 - B32B3/06 (EP)
 - B32B5/02 (EA)
 - B32B5/022 (EP, US)
 - B32B5/024 (US)
 - B32B5/028 (EP)
 - B32B5/16 (EA)
 - B32B5/18 (EP, EA, KR)
 - B32B5/245 (US)
 - B32B7/12 (EP)
 - B32B9/02 (EP)
 - B32B9/045 (EP)
 - B32B25/08 (EP)
 - B32B27/065 (EP, KR, US)
 - B32B27/12 (EP)
 - B32B27/20 (EP)
 - B32B27/22 (EP, KR)
 - B32B27/30 (EA)
 - B32B27/304 (EP, US)
 - B32B27/32 (EP)
 - B32B27/36 (EP)
 - B32B27/40 (EP)
 - B32B29/005 (EP)
 - B44C5/0407 (US)
 - E04F15/02038 (US)

CA	- E04F15/10 (EA)
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	- E04F15/107 (EP, KR, US)
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	- B29K2105/04 (US)
	- B29K2309/08 (US)
	- B29L2031/732 (US)
	- B32B5/02 (US)
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	- B32B2260/021 (EP)
	- B32B2260/028 (EP)
	- B32B2260/046 (EP)
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	- B32B2264/108 (EP)
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	- B32B2307/546 (EP)
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	- B32B2471/00 (EP, US)
	- B32B2607/00 (EP, KR)
	- E04F2201/0146 (EP, KR, US)
	- E04F2201/0153 (EP, KR, US)
	- E04F2201/0552 (EP, KR, US)
	- E04F2290/042 (EP, US)
PA	- IVC BVBA [BE]
TI	- FLOOR PANEL AND METHOD FOR MANUFACTURING A FLOOR PANEL
AB	- Floor panel (1) with a substrate (17), comprising thermoplastic material, a decor (2) provided thereon, and, on at least one pair

of opposite edges (3-4, 7-8),
coupling parts (5-6, 9-10)
realized at least partially from
the substrate (17), said coupling
parts allowing to effect a
mechanical locking between two
of such **floor** panels (1),
characterized in that the
substrate (17) comprises a rigid
substrate layer (17A) of
thermoplastic material, and
a **glass fiber** layer (18) is present
in the **floor panel** (1).

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PN - [CA2984309](#) A1 20111117

PNFP - CA2984309 C 20191210

PR - BE20100000283
20100510; CA20112795411
20110428

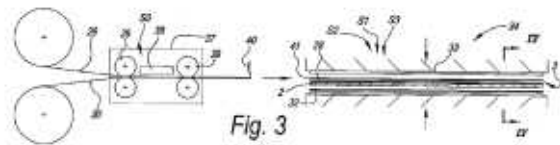
AP - CA20112984309 20110428

DT - I

CCI - [B32B3/06](#) ; [B32B5/145](#) ;
[B32B5/18](#) ; [B32B7/02](#) ;
[B32B7/027](#) ; [B32B7/12](#) ;
[B32B21/02](#) ; [B32B27/065](#) ;
[B32B27/08](#) ; [B32B27/283](#) ;
[B32B27/30](#) ; [B32B27/40](#) ;
[B32B37/153](#) ; [B32B37/226](#) ;
[B44C1/24](#) ; [B44C5/04](#) ;
[E04F15/02038](#) ; [E04F15/02194](#) ;
[E04F15/102](#) ; [E04F15/105](#) ;
[E04F15/107](#)

CCA - [B32B38/145](#) ; [B32B2255/102](#) ;
[B32B2255/26](#) ; [B32B2266/0235](#) ;
[B32B2266/08](#) ; [B32B2307/412](#) ;
[B32B2307/414](#) ; [B32B2307/72](#) ;
[B32B2309/02](#) ; [B32B2309/04](#) ;
[B32B2309/105](#) ; [B32B2309/12](#) ;
[B32B2310/0825](#) ; [B32B2327/06](#) ;
[B32B2419/04](#) ; [B32B2451/00](#) ;
[B32B2471/00](#) ; [E04F2201/0107](#) ;
[E04F2201/023](#) ; [Y10T156/10](#) ;
[Y10T156/1039](#) ; [Y10T156/1084](#)

CI - B29C48/21 (EP, US)
- B32B3/06 (EP, CN, US)
- B32B3/12 (US)



- B32B5/145 (EP, US)
- B32B5/18 (EP, KR, US)
- B32B5/245 (CN)
- B32B5/32 (CN)
- B32B7/02 (EP, US)
- B32B7/027 (EP)
- B32B7/12 (EP, CN, KR, US)
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- B32B27/08 (EP, CN, US)
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- B32B37/10 (CN)
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- B32B37/226 (EP, CN, KR, US)
- B32B38/145 (KR)
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- B44C5/04 (EP, CN, US)
- E04F15/02038 (EP, CN, KR, US)
- E04F15/02194 (EP, KR, US)
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- E04F15/102 (EP, US)
- E04F15/105 (EP, US)
- E04F15/107 (EP, CN, US)
- E04F15/18 (US)

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- B32B38/145 (EP, US)
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- B32B2255/102 (EP)
- B32B2255/26 (EP)
- B32B2262/067 (CN)
- B32B2262/101 (CN)
- B32B2264/102 (CN)
- B32B2264/104 (CN)
- B32B2266/0235 (EP, CN, US)
- B32B2266/0278 (CN)
- B32B2266/0285 (CN)
- B32B2266/08 (EP, US)

	- B32B2307/412 (EP, CN, US) - B32B2307/414 (EP, CN, US) - B32B2307/546 (CN) - B32B2307/554 (CN) - B32B2307/718 (CN) - B32B2307/72 (EP, CN, US) - B32B2307/7265 (CN) - B32B2307/734 (CN) - B32B2309/02 (EP, CN, US) - B32B2309/04 (EP, CN, US) - B32B2309/105 (EP, CN, US) - B32B2309/12 (EP, CN, US) - B32B2310/0825 (EP, CN, US) - B32B2327/06 (EP, CN, US) - B32B2361/00 (CN) - B32B2375/00 (CN) - B32B2419/04 (EP, US) - B32B2451/00 (EP, US) - B32B2471/00 (EP, CN, US) - B32B2479/00 (CN) - B32B2607/00 (CN, KR) - E04F2201/0107 (EP, US) - E04F2201/023 (EP, US) - Y10T156/10 (EP, US) - Y10T156/1039 (EP, US) - Y10T156/1084 (EP, US)
PA	- (A1 C) FLOORING IND LTD SARL [LU]
TI	- (A1) FLOOR PANEL AND METHODS FORMANUFACTURING FLOOR PANELS - (C) FLOOR PANEL AND METHODS FORMANUFACTURING FLOOR PANELS.
AB	- (C) A floor panel having a rectangular shape and at least two opposite edges is provided. The floor panel comprises a substrate including a PVC board having an average density of more than 300 kg/rn3. The PVC board includes filler materials

selected from chalk, wood **fiber**, and sand. The **floor panel** also includes a top layer provided on the substrate, fabricated from a vinyl material, with a motif formed by a print, and a transparent or translucent layer situated above the motif. The PVC board includes at least two separate layers increasing the bending stiffness of the PVC board, located at a distance from the center of the PVC board. The separate layers are selected from a **glass fiber** cloth and a **glass fiber** fabric. The **floor panel** also include coupling means, allowing the **floor panel** to be locked to an adjacent **floor panel**.

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- PN - [CN206538973U](#) U 20171003
- PR - CN201720143493U 20170217
- AP - CN201720143493U 20170217
- DT - I
- PA - XUZHOU JIALIN WOOD IND CO LTD
- TI - Real wood composite **floor** is glued to zero aldehyde
- AB - The utility model discloses a real wood composite **floor** is glued to zero aldehyde, including wooden **floor** body, wooden **floor** body upper surface is compound through zero aldehyde glue film and **panel** layer, and wooden **floor** body lower surface is compound through zero aldehyde glue film and bottom plate layer, wooden **floor** body is the laminated wood layer, the bottom plate includes soft wood board layer, and polystyrene foam board layer complex is moulded through zero aldehyde glue film and fire -retardant section mould to soft wood board layer lower surface, and fire -retardant section mould is moulded the polystyrene foam board layer and is passed through zero aldehyde glue film and wood cortex complex through zero aldehyde glue film and **glass fiber** mesh cloth layer complex, **glass fiber** mesh cloth layer's lower surface, **panel** layer surface from bottom to up sets gradually water -base resin lacquer layer, waterborne ge lisi dope layer, UV and paints layer. The utility model discloses rational in infrastructure, the feature of environmental protection can be good, wear -resisting, fire -retardant, and the heat preservation effect is excellent.

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PN - [US2017167145](#) A1 20170615

PR - BE20140000517
20140704; WO2015IB54964
20150701

AP - US201515322795 20150701

DT - **

CT - || STSE (A1)
[US4794020](#) A 19881227
[Y] (LUSSI EDWARD F [US], et al)
[Y] 1, 3-11, 13, 17, 21, 23-47
* column 4 line 17 column 5 line
62 | Claim 3 | [0141] | [0047] |
[0059] | Claim 11 | [0033] |
[0036]-[0041] | [0018] and
[0047] | *;
[US4923658](#) A 19900508
[Y] (HOVER ALEXANDER [DE], et al)
[Y] 1, 3-11, 13, 17, 21, 23-47
* column 4 line 17 column 5 line
62 | Claim 3 | [0141] Claim 4 |
column 4 lines 11-18 | page 1 |
Claim 5 | Figure 15 Claim 6 |
[0141] | [0036]-[0041] *;
[US2008289289](#) A1 20081127
[Y] (WIERCINSKI ROBERT A [US],
et al)
[Y] 1, 3-11, 13, 17, 21, 23-47
* [0002], [0011], [0036]-[0041]
and [0056]-[0061] | column 4
line 17 column 5 line 62 | Claim
3 | [0036]-[0041] Claim 4 | page
1 | Claim 5 | [0057]-[0061] |
[0036]-[0042] | [0029]-[0062] |
[0036], [0045], [0058], [0061]
-[0063], [0067], [0071] *;
[US3619229](#) A 19711109
[Y] (HARTLEIN ROBERT C)
[Y] 1, 3-11, 13, 17, 21, 23-47
* column 1 lines 5-25 | page 4 |
page 1 | *;
[US2012266555](#) A1 20121025
[Y] (CAPPELLE MARK [BE])
[Y] 1, 3-11, 13, 17, 21, 23-47
* [0001], [0002] [0141]-[0146] |
column 4 line 17 column 5 line
62 | Claim 3 | [0141] Claim 4 |
column 4 lines 11-18 | page 1 |
Claim 5 | Figure 15 Claim 6 |

Fig. 5

[0141] Claim 7 | [0036]-[0042] |
Claim 9 | [0146] | [0049] | Claim
17 | Figure 15 and [0141]-[0146]
| [0141]-[0146] | [0147] | [0033]
| [0029] *;

[US2012128946](#) A1 20120524
[Y] (KWON HYUNJONG [KR], et al)
[Y] 1, 3-11, 13, 17, 21, 23-47
* [0047] | [0059] | Claim 11 |
[0033] | [0061]-[0075] | [0018]
and [0047] | [0059] Claim 17 |
[0029]-[0062] *;

[US2007293646](#) A1 20071220
[Y] (GOSSE CLAUDIUS [BE], et al)
[Y] 1, 3-11, 13, 17, 21, 23-47
* [0047] | [0059] | Claim 11 |
[0033] | page 4 | [0018] and
[0047] | *;

[GB1248060](#) A 19710929 [Y] (ICI
LTD [GB])
[Y] 1, 3-11, 13, 17, 21, 23-47
* Claim 4 | column 4 lines 11-18
| page 1 | Claim 5 | Figure 15
Claim 6 | [0141] Claim 7 | [0036]
-[0042] | Claim 9 | [0146] |
column 1 lines 5-25 *;

[US2010129593](#) A1 20100527
[Y] (REMPT ELVIRA [DE], et al)
[Y] 1, 3-11, 13, 17, 21, 23-47
* [0087] | [0067] | Claim 3 |
page 3 Claim 4 | page 3 Claim 5
| Figure 4 Claim 6 | page 3 Claim
7 | page 4 *;

[US2011263174](#) A1 20111027
[Y] (KETZER MICHAEL [DE], et al)
[Y] 1, 3-11, 13, 17, 21, 23-47
* [0087] | [0067] | Claim 3 |
page 3 Claim 4 | page 3 Claim 5
| Figure 4 Claim 6 | page 3 Claim
7 | page 4 *;

[WO2013179261](#) A1 20131205
[Y] (UNILIN BVBA [BE])
[Y] 1, 3-11, 13, 17, 21, 23-47
* pages 3-5 | column 4 line 17
column 5 line 62 | [0087] |
[0067] | Claim 3 | page 3 Claim
4 | page 3 Claim 5 | Figure 4
Claim 6 | page 3 Claim 7 | page
4 | page 3 | pages 4-5 and 10-11

- CCI - [B32B3/06](#) ; [B32B5/022](#) ;
[B32B27/08](#) ; [B32B27/20](#) ;
[B32B27/22](#) ; [B32B27/304](#) ;
[E04F15/02038](#) ; [E04F15/102](#) ;
[E04F15/105](#) ; [E04F15/107](#)
- CCA - [B29C2043/483](#) ; [B32B2262/101](#) ;
[B32B2264/10](#) ; [B32B2307/412](#) ;
[B32B2307/75](#) ; [B32B2471/00](#) ;
[E04F2201/0153](#) ; [E04F2201/023](#)
- CI - B32B3/06 (EP, US)
- B32B5/022 (EP, US)
- B32B27/08 (EP, US)
- B32B27/20 (EP, US)
- B32B27/22 (EP, US)
- B32B27/304 (EP, US)
- E04F15/02038 (EP, US)
- E04F15/102 (EP, US)
- E04F15/105 (EP, US)
- E04F15/107 (EP, US)
- CA - B29C2043/483 (EP, US)
- B32B2262/101 (EP, US)
- B32B2264/10 (EP, US)
- B32B2307/412 (EP, US)
- B32B2307/75 (EP, US)
- B32B2471/00 (EP, US)
- E04F2201/0153 (EP, US)
- E04F2201/023 (EP, US)
- PA - UNILIN BVBA [BE]
- TI - **FLOOR PANEL** AND METHOD FOR
MANUFACTURING **FLOOR** PANELS
- AB - **Floor panel**, wherein this **floor panel** comprises at least a substrate and a decor provided thereon, wherein said substrate substantially consists of thermoplastic material and/or filler materials, wherein the substrate encloses one or more **glass fiber** cloths, wherein the total weight of **glass fiber** cloths is more than 85 grams per square meter. The invention also relates to a method for manufacturing **floor** panels which enclose a **glass fiber** cloth.

17/84 © EPODOC / EPO

- PN - [CN206189756U](#) U 20170524
- PR - CN201621234880U 20161117
- AP - CN201621234880U 20161117
- DT - I
- PA - UNIVNANJING FORESTRY
- TI - Thermal -insulated type of making an uproar wood **floor** that falls of bar
- AB - The utility model provides a thermal -insulated type of making an uproar wood **floor** that falls of bar, especially one kind with wooden material give first place to, light in weight, installation convenient to use, thermal -insulated fall make an uproar, thermal -insulated type of making an uproar wood **floor** that falls of bar that the bearing is big. The main part timber that it extends including the length direction who controls two wooden floors in edge that parallel, two wooden wale pieces of perpendicular to wood **floor** length direction support between two main part timber, from top to bottom range upon range of **panel**, non -woven fabrics are through the nail fixing at left side main part timber and right side main part timber upper surface, from top to bottom range upon range of polyethylene film, bottom plate are through the nail fixing at left side main part timber and right side main part timber lower surface, it has **glass fiber** wool to fill between two main part timber, main part timber is the canadian SPF dimension -lumber that the NO. 1 level is above, the width is not less than 35mm for the seeds grade, the **panel** is not less than 10mm's ordinary plywood, structural plywood, oriented strand board or gypsum board for thickness, and the bottom plate is not less than 15mm's oriented strand board for thickness.

18/84 © EPODOC / EPO

- PN - [CN206110609U](#) U 20170419
- PR - CN201621141380U 20161020
- AP - CN201621141380U 20161020
- DT - I
- PA - CHANG'AN UNIV
- TI - Moisture -proof environmental protection **floor**
- AB - The utility model discloses a moisture -proof environmental protection **floor**, and comprises a base material, the last fixed surface of substrate is connected with the glue film that foams, on foam the last fixed surface of glue film and be connected with polyvinyl chloride **panel**, polyvinyl chloride **panel**'s last fixed surface is connected with the wearing layer, the upper surface integrated into one piece of wearing layer has evenly distributed's rubber protruding, the rubber arch is half circular, and the bellied surface of rubber is provided with anti -skidding screw thread, the lower fixed surface of substrate is connected with down the glue film that foams, the lower fixed surface of glue film of foaming down is connected with **glass fiber** board, **glass fiber** board's lower fixed surface is connected with the waterproof layer, the substrate is all connected through the mode of high temperature pressfitting between rather than the structure of both sides. The utility model discloses can make the **floor** have good anti -skidding effect, avoid the people to fall down, avoid appearing the accidental injury evil, it has lightened the weight on **floor** to disappear, still has good water -proof effects, makes

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PN - [US2017087781](#) A1 20170330

PNFP - US10066401 B2 20180904

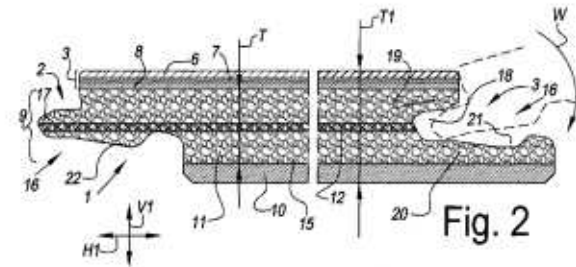
PR - US201615377198
 20161213; BE20120000370
 20120601; BE20120000474
 20120706; US201414402022
 20141118; WO20131B54481
 20130530

AP - US201615377198 20161213

DT - **

CT - || R141 (A1)
 [US3623937](#) A 19711130 [
] (GASAWAY GLEN P);
 [US2012009377](#) A1 20120112 [
] (DODGE III ARTHUR B [US], et
 al);
 [US2013209810](#) A1 20130815 [
] (DODGE III ARTHUR B [US], et
 al);
 [US2015121793](#) A1 20150507 [
] (SEGAERT MARTIN [BE], et al);
 [US2016144606](#) A1 20160526 [
] (VAN VLASSENRODE KRISTOF
 [BE], et al);
 [US2016361901](#) A1 20161215 [
] (DODGE III ARTHUR B [US], et
 al);
 [US9624678](#) B2 20170418 [
] (SEGAERT MARTIN [BE], et al)

- || STSE (B2)
 [US3623937](#) A 19711130 [
] (GASAWAY GLEN P);
 [US9624678](#) B2 20170418 [
] (SEGAERT MARTIN [BE], et al);
 [US2012009377](#) A1 20120112 [
] (DODGE III ARTHUR B [US], et
 al);
 [US2013209810](#) A1 20130815 [
] (DODGE III ARTHUR B [US], et
 al);
 [US2015121793](#) A1 20150507 [
] (SEGAERT MARTIN [BE], et al);
 [US2016144606](#) A1 20160526 [
] (VAN VLASSENRODE KRISTOF



	[BE], et al); US2016361901 A1 20161215 [] (DODGE III ARTHUR B [US], et al); US2017087781 A1 20170330 [] (SEGAERT MARTIN [BE], et al)
CCI	- B29C43/30 ; B29C43/48 ; B29C70/081 ; B29C70/506 ; B32B37/1027 ; B32B37/24 ; B32B38/145 ; E04F15/02038 ; E04F15/105 ; E04F15/107
CCA	- B29C2043/483 ; B29K2101/12 ; B29K2309/08 ; B29L2031/732 ; B32B37/0015 ; B32B2305/08 ; B32B2305/22 ; B32B2305/30 ; B32B2307/412 ; B32B2307/414 ; B32B2307/7242 ; B32B2307/734 ; B32B2309/105 ; B32B2315/085 ; B32B2327/06 ; B32B2471/00 ; E04F2201/0153 ; E04F2201/0161 ; Y10T428/24868
CI	- B27N3/06 (EP, US) - B29C43/006 (US) - B29C43/30 (EP, US) - B29C43/305 (EP, US) - B29C43/48 (EP, US) - B29C70/081 (EP, US) - B29C70/506 (EP, US) - B32B5/024 (US) - B32B27/12 (EP, US) - B32B27/304 (EP, US) - B32B37/1027 (EP, US) - B32B37/24 (EP, US) - B32B38/145 (EP, US) - D06N3/0022 (US) - E04F15/02038 (EP, US) - E04F15/08 (US) - E04F15/102 (US) - E04F15/105 (EP, KR, US) - E04F15/107 (EP, KR, US)
CA	- B29C2043/483 (EP, US) - B29K2101/12 (EP, US) - B29K2309/08 (EP, US) - B29L2031/732 (EP, US) - B32B37/0015 (EP, US)

	- B32B2305/08 (EP, US) - B32B2305/10 (US) - B32B2305/22 (EP, US) - B32B2305/30 (EP, US) - B32B2307/412 (EP, US) - B32B2307/414 (EP, US) - B32B2307/7242 (EP, US) - B32B2307/734 (EP, US) - B32B2309/105 (EP, US) - B32B2315/08 (US) - B32B2315/085 (EP, US) - B32B2327/06 (EP, US) - B32B2398/20 (US) - B32B2419/00 (US) - B32B2471/00 (EP, US) - E04F2201/0153 (EP, US) - E04F2201/0161 (EP, KR, US) - E04F2201/023 (US) - Y10T428/24868 (EP, US)
PA	- (A1 B2) UNILIN BVBA [BE]
TI	- (A1) PANEL FOR FORMING A FLOOR COVERING AND METHOD FOR MANUFACTURING SUCH PANELS - (B2) Panel for forming a floor covering and method for manufacturing such panels
AB	- (A1 B2) Panel for forming a floor covering, where this panel has at least two layers of thermoplastic material, where the two layers substantially have a strewn and pressed granulate, where the respective layers enclose a glass fiber layer.

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PN	- CN106381961 A 20170208
PR	- CN20161112955 20161117
AP	- CN20161112955 20161117
DT	- I
CT	- STSE (A)

[CN101476368](#) A 20090708 [Y] (UNIV NANJING [CN])
[Y] 1-4
* 说明书第2页7-21段以及说明书具体实施方式, 图1-2 *;
[US2011189447](#) A1 20110804 [A] (SCHUMAN THOMAS L [US], et al)
[A] 1-4
* 全文 *;
[CN201972286U](#) U 20110914 [A] (UNIV TONGJI)
[A] 1-4
* 全文 *;
[CN103741931](#) A 20140423 [Y] (TAICANG PAIOU TECHNOLOGY CONSULTATION SERVICE CO LTD)
[Y] 1-4
* 说明书第[0016]-[0027]段、[0034]-[0036]段, 图1-2 *;
[JP2015081430](#) A 20150427 [A] (JFE METAL PRODUCTS & ENG INC)
[A] 1-4
* 全文 *;
[CN104989068](#) A 20151021 [Y] (JIANGSU RUISHENG NEW MATERIAL CO LTD)
[Y] 1-4
* 说明书实施例1, 图1 *;
[CN206189756U](#) U 20170524 [R] (UNIV NANJING FORESTRY)
[R] 1-4
* 权利要求1-4 *

- CI - E04F11/108 (CN)
- E04F11/17 (CN)
- PA - UNIVNANJING FORESTRY
- TI - Strip-shaped heat insulation and noise reduction type wooden **floor** slab
- AB - The invention provides a strip-shaped heat insulation and noise reduction type wooden **floor** slab which takes a wooden material as a main part, is light in weight, convenient to install and use, good in heat insulation and noise reduction effects and large in load bearing. The strip-shaped heat insulation and noise reduction type wooden **floor** slab comprises left and right main body woods which are parallel and extend along the length direction of the wooden **floor** slab; two wooden cross supporting plates, which are vertical to the length direction of the wooden **floor** slab, are supported between the two main body woods; a **panel** and a non-woven fabric, which are stacked up and down, are fixed on upper surfaces of the left-side main body wood and the right-side main body wood through screws; a polyethylene film and a bottom plate, which are stacked up and down, are fixed on lower surfaces of the left-side main body wood and the right-side main body wood through screws; **glass fiber** cotton is charged between the two main body woods; the main body woods are Canadian SPF dimension stocks with the tree variety grade which is NO.1 grade or higher and the width which is no less than 35mm; the **panel** is a common plywood, a structural plywood, a directional structure shaving board or a gypsum board with the thickness which is not smaller than 10mm; the bottom plate is a directional structure shaving board with the thickness which is not smaller than 15mm.

PR - CN201620704811U 20160706
 AP - CN201620704811U 20160706
 DT - I
 PA - ANJI HEFENG BAMBOO & WOOD IND CO LTD
 TI - Composite wood **floor** who contains **glass fiber** reinforcement type
 AB - The utility model discloses a composite wood **floor** who contains **glass fiber** reinforcement type, including **panel** layer, basal layer and enhancement layer, the whole of fixing is assembled for the unanimous rectangle stuff level of many thickness to the basal layer, the basal layer top surface is fixed in on the **panel** layer, the **glass fiber** net check cloth of enhancement layer for being fixed in the basal layer bottom surface, the utility model has the advantages of adopting the stress between the balanced basal layer of enhancement layer and the **panel** layer, using fast small -bore timber of giving birth to as laminate flooring's horizontal intermediate level in a large number, practiced thrift precious timber resources, the **floor** of producing has the effect of preapring for an unfavorable turn of events and appearing, increases and strengthens heat conduction, insulation, special effect such as fire -retardant behind the special additive in addition.

22/84 © EPODOC / EPO

PN - [CN205742888U](#) U 20161130
 PR - CN201620400483U 20160429
 AP - CN201620400483U 20160429
 DT - I
 PA - HUNAN WANGZHENG NEW MAT CO LTD
 TI - High strength bamboo wood composite **floor**
 AB - The utility model provides a high strength bamboo wood composite **floor**, includes solid wood **panel** and the strengthening layer of shaping under solid wood **panel**, the strengthening layer is multilayer composite construction, and including wooden plastic material base plate, this wooden plastic material base plate lower surface shaping has one deck plastic -aluminum bottom plate, and the upper surface shaping has an one deck bamboo template and one deck greenwood template of inviting, the bamboo template is perpendicular with the **fiber** direction of fast greenwood template, and has one deck polyimide resin layer through hot briquetting between bamboo template and fast greenwood template, and the shaping has one deck **glass fiber** net check cloth in this polyimide resin layer. The utility model discloses low in manufacturing cost, environmental protection are pleasing to the eye, with low costs, and simultaneously, intensity is high, and rigidity is big, light in weight, and long service life has the economic value and the social value of preferred.

23/84 © EPODOC / EPO

PN - [CN205742863U](#) U 20161130
 PR - CN201620406144U 20160429
 AP - CN201620406144U 20160429
 DT - I
 PA - HUNAN WANGZHENG NEW MAT CO LTD

- TI - Anti crack bamboo -wood **floor**
- AB - The utility model provides an anti crack bamboo -wood **floor**, includes **panel**, bottom plate and the shaping core between **panel** and bottom plate, **panel** and bottom plate are the composite sheet, and for core structure symmetry, it is base plate and bamboo chip concatenation face in proper order outside the core side direction, through the sticky shaping of hot pressing, the base plate is the aluminium -plastic **panel** that a thickness is 2~3mm, and it has the dot matrix through -hole to open on this aluminium - plastic **panel**, the lateral surface of base plate pass through the heat stable resin glue with bamboo chip concatenation face veneer, and the heat stable resin glue and the base plate between or the heat stable resin glue with bamboo chip concatenation face between the packing have one deck **glass fiber** layer. The utility model discloses stable in structure, the easy problem that fractures in bamboo **floor** end can effectively be solved to difficult fracture.

24/84 © EPODOC / EPO

PN - [US2016279914](#) A1 20160929

PR - WO2013EP71277 20131011

AP - US201315028193 20131011

DT - **

CT - || STSE (A1)

[US2010055420](#) A1 20100304

[Y] (VERMEULENBRUNOPPAUL LOUIS [BE])

[Y] 10-19

* para [0023] | Abstract Fig. 2

para [0032] | para [0039] | Fig.

1 paras [0027]-[0029] | para

[0009] | Fig. 1 para [0010],

[0014],[0030] | claim 11 |

Section 112 | para [0041] |

claim 12 | paras [0009] and

[0032] | Fig. 2 para [0037] *;

[US2007099524](#) A1 20070503

[Y] (PORTER JOHN [CA])

[Y] 10-19

* paras [0014]-[0016] | paras

[0094]-[0100] | claim 10 | Fig.

1A para [0029] | paras [0037]

-[0039] | abs | paras [0038] and

[0039] para [0040] | para [0041]

| Fig. 1A | paras [0029] and

[0039] | para [0037] | para

[0011] | para [0079] | paras

[0038] and [0039] | Fig. 1 | para

[0029] | Fig. 9 | para [0096] |

para [0099] | para [0094] | Fig.

7 | paras [0093]-[0100] | claim

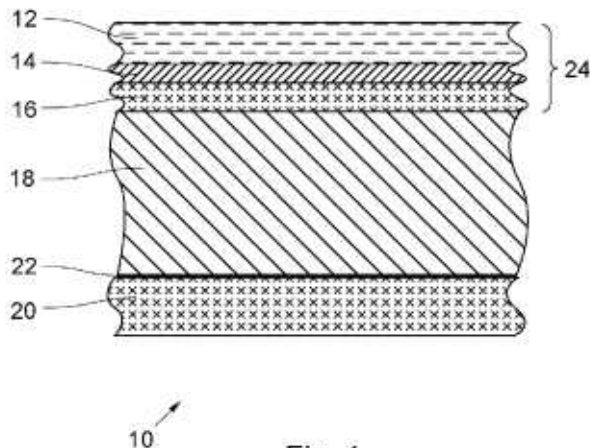


Fig. 1

11 | Section 112 | para [0014] |
para [0033] | para [0094] and
[0100] | para [0090] | claim 16 |
para [0040] *;

[US2004003888](#) A1 20040108

[A] (MOTT LAURENCE [SE], et al);

[US4353955](#) A 19821012

[A] (COOK JOHN H);

[US2011268933](#) A1 20111103

[A] (HAHN KRIS EDWARD [US], et al);

[US2002150779](#) A1 20021017

[A] (WARD HARRY D [US], et al)

- CCI - [B32B27/12](#) ; [B32B27/40](#)
- CCA - [B32B2471/00](#)
- CI - B32B27/12 (EP, US)
- B32B27/40 (EP, US)
- B32B37/12 (US)
- B32B38/0004 (US)
- E04F15/02183 (US)
- E04F15/102 (US)
- E04F15/107 (US)
- CA - B32B2262/101 (US)
- B32B2307/554 (US)
- B32B2471/00 (EP, US)
- PA - WPT GMBH [DE]
- TI - Elastic **Floor Panel**
- AB - An elastic **floor panel** (10),
includes a dimensionally stable
core (18) of polyurethane and a
layered compound structure
(24), which is disposed on the
core (18), and the back of
the **floor panel** (10) is coated
with a **fiber** mat (20), the fibers
of which consist of **glass**, PET, PP,
polyester or renewable raw
materials, and which is sealed
on the side facing the core by a
barrier layer.

25/84 © EPODOC / EPO

PN - [CN205330085U](#) U 20160622

PR - CN20162083800U 20160128

AP - CN20162083800U 20160128

DT - I

PA - HUANG NARU

TI - Healthy environment -friendly **floor**

AB - The utility model relates to a healthy environment -friendly **floor**, including foundation plate laminate and have a thermal insulating layer in foundation plate's top laminate and have a **glass fiber** layer in thermal insulating layer's top, and then having laminated and one can absorb electromagnetic electromagnetic radiation absorbed layer in the top on **glass fiber** layer, and is in the top of electromagnetic radiation absorbed layer coats and has a far -infrared coating far -infrared coating's the upper surface decoration **panel** that has still coated. The utility model discloses the special design of each level order draws through the repetition test, is not simple stack, and this **floor** is provided with **glass fiber**, can effectively improve the comprehensive strength on this **floor** to the thermal insulating layer who sets up can play the thermal -insulated effect of effectual heat preservation, and this **floor** still is provided with the electromagnetic radiation absorbed layer that can absorb electromagnetic radiation simultaneously, but active absorption electromagnetic radiation, the protection is human healthy, and the far -infrared coating who designs in addition then has the effect of far infrared health care.

26/84 © EPODOC / EPO

PN - [KR20160025986](#) A 20160309

PNFP - KR101831372B B1 20180404

PR - KR20140113537 20140828

AP - KR20140113537 20140828

DT - I

CI - E04B1/942 (KR)

- E04C2/26 (KR)

- E04C2/32 (KR)

- E04C2/50 (KR)

- E04F15/107 (KR)

CA - E04F2290/045 (KR)

PA - (A)

SEOHAN ANTAMINE CO LTD [KR]

TI - (A)

DECORATION **FLOOR PANEL** HAVING ECO-FRIENDLY, NON-INFLAMMABLE AND ANTI-CURLING PROPERTY

- (B1)

Decoration **floor panel** having eco-friendly non-inflammable and anti-curling property

AB - (A)

The present invention relates to a decoration **floor panel** of a building comprising: a base layer (10) generated by bonding a magnesium oxide board to a wood core; a sheet layer (20) generated by combining a core layer (22), a pattern paper layer (24), and an overlay layer (26) and bonded to an upper side of the base layer (10); and a functional member formed by intervening a noise blocking **glass fiber** and an electromagnetic wave reducing carbon black between the base layer (10) and the sheet layer (20). As such, the

present invention has an effect of achieving a prevention of fire by generating a decorative **floor panel** with increased flame retardancy based on an environmentally friendly property as a building finishing material; and at the same time has the effect of preventing curling causing variation in the dimension during a manufacturing process or usage as the **floor panel** due to thermal bonding.

27/84 © EPODOC / EPO

PN - [KR101566776B](#) B1 20151106
PR - KR20150100391 20150715
AP - KR20150100391 20150715
DT - I
PA - WON YANG ARCHITECTS & ENGINEERING CO LTD [KR]
TI - **FLOOR PANNEL FOR SHUTTING NOISE BETWEEN STAIRS OF APARTMENT HOUSE**
AB - The present invention relates to a **floor panel** to prevent a **floor** noise in an apartment house and, more specifically, relates to a **floor panel** to prevent the **floor** noise in the apartment house which reduces construction time by facilitating an assembling structure and improving the effects of reducing **floor** noises. The **floor panel** to prevent **floor** noises in the apartment house obtains the effect of preventing **floor** noises without changing a **floor** structure of the apartment house; reduces cooling and heating costs because the **floor panel** has excellent heat insulation, thermal barrier, and sound insulation effects; and improves a convenience of construction. The **floor panel** to prevent **floor** noise in the apartment comprises: a lower housing, a porous foamed polyethylene sheet, a **glass fiber** plate, a silicone sheet, an upper housing, a leaf spring, coupling bolts, and couplers.

28/84 © EPODOC / EPO

PN - [CN204645510U](#) U 20150916
PR - CN201520261643U 20150428
AP - CN201520261643U 20150428
DT - I
PA - MIAO BAOJIANG
TI - High elasticity is equipped with film material
AB - The utility model discloses a high elasticity is equipped with film material, including **panel** basic unit, the below of **panel** basic unit is provided with the **glass fiber** layer, the below on **glass fiber** layer is provided with the expanded plastics layer, the below on expanded plastics layer is provided with the gum layer, the top of **panel** basic unit is provided with transparent water proof membrane coating. The utility model discloses a being provided expanded plastics layer and **glass fiber** layer in the **panel** basic unit, can having improved the elasticity and the pliability on **floor** effectively, the laminating is convenient, prevents simultaneously that **floor** body from removing for contact between adhesive layer and the **panel** basic unit is more stable, simple structure, and construction convenience is swift.

29/84 © EPODOC / EPO

PN - [WO2016001859](#) A1 20160107

PR - BE20140000517 20140704

AP - WO2015IB54964 20150701

DT - *; Rep

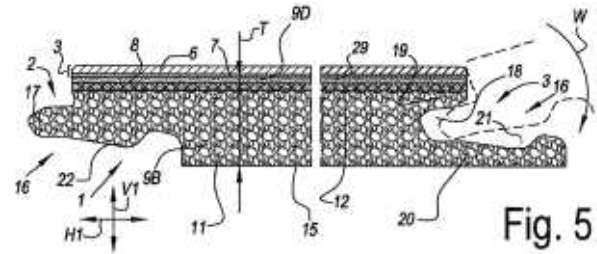
CT - |EP| ISR (A1)
[US2012128946](#) A1 20120524
 [XYI] (KWON HYUNJONG [KR], et al)
 [X] 1-13,17-19
 * paragraphs [0029] , [0064] ,
 [0063] , [0021] , [0106] - [0108] -
 [0018] , [0025] , [0029] , [0100] ,
 [0036] , [0047] , [0050] , [0051];
 figure 1 *
 [Y] 20
 [I] 14-16;
[US2010201025](#) A1 20100812
 [Y] (GEORGES JEAN-PHILIPPE [BE], et al)
 [Y] 20
 * paragraph [0065] -
 paragraph [0066] *

CCI - [B32B3/06](#) ; [B32B5/022](#) ;
[B32B27/08](#) ; [B32B27/20](#) ;
[B32B27/22](#) ; [B32B27/304](#) ;
[E04F15/02038](#) ; [E04F15/102](#) ;
[E04F15/105](#) ; [E04F15/107](#)

CCA - [B29C2043/483](#) ; [B32B2262/101](#) ;
[B32B2264/10](#) ; [B32B2307/412](#) ;
[B32B2307/75](#) ; [B32B2471/00](#) ;
[E04F2201/0153](#) ; [E04F2201/023](#)

CI - B32B3/06 (EP, US)
 - B32B5/022 (EP, US)
 - B32B27/08 (EP, US)
 - B32B27/20 (EP, US)
 - B32B27/22 (EP, US)
 - B32B27/304 (EP, US)
 - E04F15/02038 (EP, US)
 - E04F15/102 (EP, US)
 - E04F15/105 (EP, US)
 - E04F15/107 (EP, US)

CA - B29C2043/483 (EP, US)
 - B32B2262/101 (EP, US)
 - B32B2264/10 (EP, US)
 - B32B2307/412 (EP, US)
 - B32B2307/75 (EP, US)



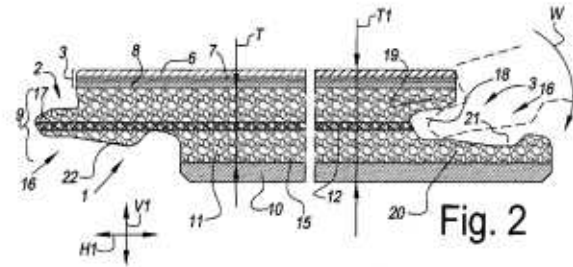
- B32B2471/00 (EP, US)
- E04F2201/0153 (EP, US)
- E04F2201/023 (EP, US)
- PA - UNILIN BVBA [BE]
- TI - **FLOOR PANEL** AND METHOD FOR
MANUFACTURING **FLOOR** PANELS
- AB - **Floor panel** and method for
manufacturing **floor**
panels. **Floor panel**, wherein
this **floor panel** (1) comprises at
least a substrate and a decor
provided thereon, wherein said
substrate (11) substantially
consists of thermoplastic
material and/or filler materials,
the substrate enclosing one or
more **glass fiber** cloths (12)
optionally bordering a portion
obtained by hardening of
plastisol, wherein the total
weight of **glass fiber** cloths is
more than 85 grams per square
meter. The invention also relates
to a method for
manufacturing **floor** panels
which enclose a **glass fiber** cloth
and a layer of plastisol on
said **glass fiber** cloth.

30/84 © EPODOC / EPO

- PN - [CN104675050](#) A 20150603
- PR - CN201310617661 20131126
- AP - CN201310617661 20131126
- DT - I
- PA - XI AN GUOLONG BAMBOO TECH CO
- TI - Bamboo **floor**
- AB - A bamboo **floor** is characterized by comprising a bamboo **panel**, a **glass fiber** fabric is arranged on the lower portion of the bamboo **panel**, and a base layer is arranged below the **glass fiber** fabric. The **glass fiber** fabric is arranged between the **panel** and the base layer, and the bamboo **floor** has the advantages of sound insulation, shake prevention and moisture prevention.

31/84 © EPODOC / EPO

PN - [CN104619936](#) A 20150513
 PNFP - CN104619936B B 20180223
 PR - WO20131B54481
 20130530; BE20120000370
 20120601; BE20120000474
 20120706
 AP - CN20138036383 20130530
 DT - I
 CT - || STSE (A)
[GB1248060](#) A 19710929 [Y] (ICI
 LTD [GB])
 [Y] 1-8
 * 第1栏第35-40行, 第2栏第55-
 60行, 第70-75行 *;
[CN102123840](#) A 20110713
 [Y] (TARKETT FRANCE)
 [Y] 7-8
 * 说明书第48-64段, 表1-4 *;
[CN201521091U](#) U 20100707
 [A] (JIANGLI DECORATIVE
 MATERIALS CO LTD)
 [A] 1-8
 * 全文 *;
[EP2339092](#) A1 20110629
 [A] (FLOORING IND LTD SARL [LU])
 [A] 1-8
 * 全文 *;
[CN101909836](#) A 20101208
 [Y] (VAELINGE INNOVATION
 BELGIUM BV)
 [Y] 1-8
 * 说明书第50段, 第59段, 第61
 段, 第134段, 第143-151段, 第
 157段, 第184段, 第196段, 附
 图1c, 附图3a-3d, 附图11a *;
[US6306318](#) B1 20011023
 [A] (RICCIARDELLI THOMAS E
 [US], et al)
 [A] 1-8
 * 全文 *
 CCI - [B29C43/30](#) ; [B29C43/48](#) ;
[B29C70/081](#) ; [B29C70/506](#) ;
[B32B37/1027](#) ; [B32B37/24](#) ;
[B32B38/145](#) ; [E04F15/02038](#) ;
[E04F15/105](#) ; [E04F15/107](#)
 CCA - [B29C2043/483](#) ; [B29K2101/12](#) ;
[B29K2309/08](#) ; [B29L2031/732](#) ;



[B32B37/0015](#) ; [B32B2305/08](#) ;
[B32B2305/22](#) ; [B32B2305/30](#) ;
[B32B2307/412](#) ; [B32B2307/414](#) ;
[B32B2307/7242](#) ;
[B32B2307/734](#) ; [B32B2309/105](#) ;
[B32B2315/085](#) ; [B32B2327/06](#) ;
[B32B2471/00](#) ; [E04F2201/0153](#) ;
[E04F2201/0161](#) ;
[Y10T428/24868](#)

CI

- B27N3/06 (EP, US)
- B29C43/006 (US)
- B29C43/30 (EP, US)
- B29C43/305 (EP, US)
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- B29C70/081 (EP, US)
- B29C70/506 (EP, US)
- B32B5/024 (US)
- B32B27/12 (EP, US)
- B32B27/304 (EP, US)
- B32B37/1027 (EP, US)
- B32B37/24 (EP, US)
- B32B38/145 (EP, US)
- D06N3/0022 (US)
- E04F15/02038 (EP, US)
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- E04F15/107 (EP, KR, US)

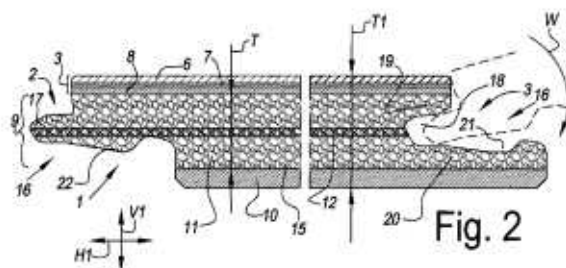
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- B29C2043/483 (EP, US)
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- B32B2307/414 (EP, US)
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- B32B2315/08 (US)
- B32B2315/085 (EP, US)
- B32B2327/06 (EP, US)

	- B32B2398/20 (US)
	- B32B2419/00 (US)
	- B32B2471/00 (EP, US)
	- E04F2201/0153 (EP, US)
	- E04F2201/0161 (EP, KR, US)
	- E04F2201/023 (US)
	- Y10T428/24868 (EP, US)
PA	- (A) UNILIN BVBA
TI	- (A) Panel for forming a floor covering and method for manufacturing such panels.
AB	- (A) Panel for forming a floor covering, wherein this panel (1) comprises at least two layers (9A-9B) of thermoplastic material, characterized in that said two layers (9A- 9B) substantially consist of a strewn and pressed granulate (23), wherein the respective layers (9 A-9B) enclose a glass fiber layer (12).

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PN	- US2015121793 A1 20150507
PNFP	- US9624678 B2 20170418
PR	- BE20120000370 20120601; BE20120000474 20120706; WO20131B54481 20130530
AP	- US201314402022 20130530
DT	- **
CT	- R141 (A1) US2007091074 A1 20070426 [] (NASHIKI TOMOTAKE [JP], et al); US2010003502 A1 20100107 [] (NASHIKI TOMOTAKE [JP], et al); US2010092731 A1 20100415 [] (PERVAN DARKO [SE], et al); US2012276348 A1 20121101 [] (CLAUSI ROBERT N [CA], et al); US2013067842 A1 20130321 [] (MEERSSEMAN LAURENT [BE], et



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[US8431054](#) B2 20130430 [
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[US2013164507](#) A1 20130627 [
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[US2005282449](#) A1 20051222 [
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[US2011177739](#) A1 20110721 [
] (KILJUNEN SAMANTHA [FI], et al);
[US2011268937](#) A1 20111103 [
] (SCHACHT BENNY [BE], et al);
[US8419877](#) B2 20130416 [
] (PERVAN DARKO [SE], et al);
[US2013104486](#) A1 20130502 [
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] (WINDMOELLER ULRICH [DE]);
[EP1593490](#) A1 20051109 [
] (QUADRANT IP AG [CH])
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] (JOSEPH BORACK, et al);

] (JOSEPH BORACK, et al);
[US3623937](#) A 19711130 [
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[US3988098](#) A 19761026 [
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[US8549807](#) B2 20131008 [
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al);
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[US2006270298](#) A1 20061130 [
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[US2010003502](#) A1 20100107 [
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] (MCCANN ERIC [US], et al);
[US2014242342](#) A1 20140828 [

	] (VANDEVOORDE CHRISTOF [BE], et al); US2015107178 A1 20150423 [] (MEERSSEMAN LAURENT [BE], et al); EP1593490 A1 20051109 [] (QUADRANT IP AG [CH])
CCI	- B29C43/30 ; B29C43/48 ; B29C70/081 ; B29C70/506 ; B32B37/1027 ; B32B37/24 ; B32B38/145 ; E04F15/02038 ; E04F15/105 ; E04F15/107
CCA	- B29C2043/483 ; B29K2101/12 ; B29K2309/08 ; B29L2031/732 ; B32B37/0015 ; B32B2305/08 ; B32B2305/22 ; B32B2305/30 ; B32B2307/412 ; B32B2307/414 ; B32B2307/7242 ; B32B2307/734 ; B32B2309/105 ; B32B2315/085 ; B32B2327/06 ; B32B2471/00 ; E04F2201/0153 ; E04F2201/0161 ; Y10T428/24868
CI	- B27N3/06 (EP, US) - B29C43/006 (US) - B29C43/30 (EP, US) - B29C43/305 (EP, US) - B29C43/48 (EP, US) - B29C70/081 (EP, US) - B29C70/506 (EP, US) - B32B5/024 (US) - B32B27/12 (EP, US) - B32B27/304 (EP, US) - B32B37/1027 (EP, US) - B32B37/24 (EP, US) - B32B38/145 (EP, US) - D06N3/0022 (US) - E04F15/02038 (EP, US) - E04F15/08 (US) - E04F15/102 (US) - E04F15/105 (EP, KR, US) - E04F15/107 (EP, KR, US)
CA	- B29C2043/483 (EP, US) - B29K2101/12 (EP, US) - B29K2309/08 (EP, US) - B29L2031/732 (EP, US)

	- B32B37/0015 (EP, US) - B32B2305/08 (EP, US) - B32B2305/10 (US) - B32B2305/22 (EP, US) - B32B2305/30 (EP, US) - B32B2307/412 (EP, US) - B32B2307/414 (EP, US) - B32B2307/7242 (EP, US) - B32B2307/734 (EP, US) - B32B2309/105 (EP, US) - B32B2315/08 (US) - B32B2315/085 (EP, US) - B32B2327/06 (EP, US) - B32B2398/20 (US) - B32B2419/00 (US) - B32B2471/00 (EP, US) - E04F2201/0153 (EP, US) - E04F2201/0161 (EP, KR, US) - E04F2201/023 (US) - Y10T428/24868 (EP, US)
PA	- (A1) UNILIN BVBA [BE]; UNILIN BVBA [BE] - (B2) UNILIN BVBA [BE]
TI	- (A1) PANEL FOR FORMING A FLOOR COVERING AND METHOD FOR MANUFACTURING SUCH PANELS - (B2) Panel for forming a floor covering and method for manufacturing such panels
AB	- (A1 B2) Panel for forming a floor covering, wherein this panel comprises at least two layers of thermoplastic material, wherein said two layers substantially consist of a strewn and pressed granulate, wherein the respective layers enclose a glass fiber layer.

PN - [GB2521604](#) A 20150701

PNFP - GB2521604 B 20181003

PR - GB20130022720 20131220

AP - GB20130022720 20131220

DT - *; Rep

CT - || STSE (A)
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] (HERBST DONALD);
[DE2336902](#) A1 19750206 [
] (PLEIN WAGNER SOEHNE);
[DE102012005655](#) A1 20130926 [
] (HOEHL HERBERT [DE]);
[JPS61134527](#) A 19860621 [
] (MITSUBISHI ELECTRIC CORP);
[US4588125](#) A 19860513 [] (LUTZ
 HANS[DE])

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[DE2336902](#) A1 19750206 [
] (PLEIN WAGNER SOEHNE);
[DE102012005655](#) A1 20130926 [
] (HOEHL HERBERT [DE]);
[US4588125](#) A 19860513 [] (LUTZ
 HANS[DE]);
[JPS61134527](#) A 19860621 [
] (MITSUBISHI ELECTRIC CORP)

CCI - [E04F15/182](#) ; [E04F15/186](#) ;
[F24D3/142](#)

CCA - [E04F15/08](#) ; [Y02B30/00](#)

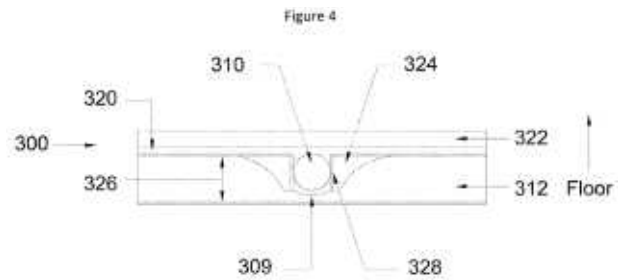
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 - E04F15/087 (GB)
 - E04F15/182 (EP)
 - E04F15/186 (EP)
 - F24D3/142 (EP, GB)

CA - E04F15/08 (EP)
 - Y02B30/00 (EP)

PA - (A B)
 POLYFAB COATINGS AND SYSTEMS
 LTD [GB]

TI - (A)
 Insulative **panel**
 - (B)
 Insulative underfloor **panel**

AB - (A)



An underfloor insulative **panel** 300 comprises at least one channel 309 provided in a surface of said **panel** for accommodating a conducting element 310. The channel comprises a heat transfer material 324 extending from within said channel to the surface of said **panel**. The thickness of the heat conducting material increases along the side walls from the base of the channel to the surface of the **panel**, it may be cement-based and preferably extends over the entire surface of the **panel**. A **fibre glass** mesh may be embedded in the cement to reinforce the **panel**. The channel is preferably shaped with two convex curves before being filled with the cement. The channel preferably also has expansion strips 328 to ensure contact. Tiles 322 and adhesive 320 can be placed directly on the **panel**. Also claimed is a method of manufacturing an underfloor insulative **panel** a temperature control system, and kit of parts. In use the **panel** is used in an underfloor heating system to insulate the subfloor, carry the pipes and transfer heat evenly across the **floor**.

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- PN - [CN203213534U](#) U 20130925
- PR - CN201320241008U 20130507
- AP - CN201320241008U 20130507
- DT - I
- PA - CHONGQING SD EXPERIMENT INSTR CO LTD
- TI - Thermal insulation module for large high and low temperature damp-heat test room **floor** and modular **floor**
- AB - The utility model discloses a thermal insulation module for large high and low temperature damp-heat test room **floor** and modular **floor**. The module comprises a

skeleton made of **glass fiber** reinforced plastic, wherein the skeleton has a set shape and is of a frame structure, a soleplate and a **panel**, which are made from metal plates, are fixedly connected to the upper and lower end faces of the skeleton, respectively, the soleplate and the **panel** are isolated by the skeleton, a thermal insulation material is filled in an internal space formed among the skeleton, the soleplate and the **panel**, and an annular recess used for holding sealing fillers is formed on the outer circumferential side wall of the module. The modular **floor** comprises a concrete or reinforced concrete base layer, wherein a thermal insulation bearing layer spliced and combined by a plurality of thermal insulation modules is arranged on the base layer, set gaps are arranged between the adjacent thermal insulation modules and between the thermal insulation modules and the wall body, and silicone rubber used for sealing is filled in slits formed by the gaps. The thermal insulation module disclosed by the utility model has the beneficial effects of capability of realizing standard production of the module, small heat capacity, good heat insulation effect, short **floor** construction and maintenance time, high efficiency and high cleanliness of the test room.

35/84 © EPODOC / EPO

PN - [KR20130059691](#) A 20130607

PNFP - KR101414853B B1 20140704

PR - KR20110125801 20111129

AP - KR20110125801 20111129

DT - I

CI - B29C70/28 (KR)

- E04C2/26 (KR)

- E04F15/10 (KR)

PA - (A)

LG HAUSYS LTD [KR]

TI - (A)

PANEL FOR ACCESS FLOOR AND MANUFACTURING METHOD THEREOF

- (B1)

Manufacturing method of **panel** for access **floor**

AB - (A)

PURPOSE: A **panel** for a double **floor** material and a manufacturing method thereof are provided to be recycled and to be easily formed while not applying large loads to a building because of a light weight. CONSTITUTION: A thermoplastic polymer resin(10) of a pellet state is injected into a hopper(100). The thermoplastic polymer resin is heated and is melted. The melted thermoplastic polymer resin is mixed with a **glass fiber**(20) of a 10-45 weight % so that a mixture is formed. The mixture is pressurized in a forming mold(400), and the pressurized mixture is cooled.

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PN - [WO2013179261](#) A1 20131205

PR - BE20120000370
20120601; BE20120000474
20120706

AP - WO20131B54481 20130530

DT - **

CT - | EP | ISR (A1)
[WO2009065769](#) A2 20090528
[XY] (VAELINGE INNOVATION
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[X] 1-4,7,9
* page 9, lines 22-26 *
* page 10, lines 13, 14, 19-21 *
* page 12, lines 23, 24 *
* page 20, lines 25-31 *
* page 26, line 20 - page 27,
line 24; figure 4a *
* page 27, lines 1-3, 8-15 *
* page 33, line 14 - page 34,
line 14; figures 9a, 9b *
* page 49, lines 28, 29 *
[Y] 8;
[GB1248060](#) A 19710929
[XD] (ICI LTD [GB])
[XD] 1,2,5,6
* page 1, lines 31-51, 57-61, 75-
78 *
* page 2, lines 20-51 *
* page 3, lines 34-37, 52-55, 60-
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[EP2153967](#) A1 20100217
[Y] (TARKETT FRANCE [FR])
[Y] 8
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[US6306318](#) B1 20011023
[AD] (RICCIARDELLI THOMAS E
[US], et al)
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* column 4, lines 13-15, 23-26,
58 *
* column 6, lines 3-9, 16-21 *
* column 7, lines 33-39 *
* figures 1-4 *;
[EP2339092](#) A1 20110629
[AD] (FLOORING IND LTD SARL
[LU])
[AD] 1
* paragraphs [0067] - [0070];

Fig. 2

figure 15 *

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[B29C70/081](#) ; [B29C70/506](#) ;
[B32B37/1027](#) ; [B32B37/24](#) ;
[B32B38/145](#) ; [E04F15/02038](#) ;
[E04F15/105](#) ; [E04F15/107](#)
- CCA
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[B29K2309/08](#) ; [B29L2031/732](#) ;
[B32B37/0015](#) ; [B32B2305/08](#) ;
[B32B2305/22](#) ; [B32B2305/30](#) ;
[B32B2307/412](#) ; [B32B2307/414](#) ;
[B32B2307/7242](#) ;
[B32B2307/734](#) ; [B32B2309/105](#) ;
[B32B2315/085](#) ; [B32B2327/06](#) ;
[B32B2471/00](#) ; [E04F2201/0153](#) ;
[E04F2201/0161](#) ;
[Y10T428/24868](#)
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- B27N3/06 (EP, US)
 - B29C43/006 (US)
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 - B29C43/305 (EP, US)
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 - B29C70/081 (EP, US)
 - B29C70/506 (EP, US)
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 - B32B38/145 (EP, US)
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 - B32B2305/22 (EP, US)
 - B32B2305/30 (EP, US)

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PA	- UNILIN BVBA [BE]
TI	- PANEL FOR FORMING A FLOOR COVERING AND METHOD FOR MANUFACTURING SUCH PANELS.
AB	- Panel for forming a floor covering, wherein this panel (1) comprises at least two layers (9A-9B) of thermoplastic material, characterized in that said two layers (9A- 9B) substantially consist of a strewn and pressed granulate (23), wherein the respective layers (9 A-9B) enclose a glass fiber layer (12).
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PN	- DE102012000468 A1 20130718
PNFP	- DE102012000468 B4 20170817
PR	- DE20121000468 20120113
AP	- DE20121000468 20120113
DT	- *; Rep
CT	- STSE (B4) EP1367194 A2 20031203 [] (KRONOTEC AG [CH]); EP2230364 A1 20100922 [] (FLOORING TECHNOLOGIES LTD [MT])
CCI	- B32B5/022 ; B32B5/26 ; B32B9/02 ; B32B13/00 ; B32B13/14 ; B32B17/02 ; B32B27/12 ; B32B27/304 ; C04B28/32 ; E04F15/105 ; E04F15/107
CCA	- B32B2262/101 ; B32B2315/085 ; B32B2317/02 ; B32B2419/04 ; B32B2471/00 ; C04B2111/00612 ; E04F15/02038 ; E04F2201/0115

CI	- B32B5/022 (EP) - B32B5/26 (EP) - B32B9/02 (EP) - B32B13/00 (EP) - B32B13/14 (EP) - B32B17/02 (EP) - B32B27/12 (EP) - B32B27/304 (EP) - C04B28/32 (EP) - E04F15/105 (EP) - E04F15/107 (EP)
CA	- B32B2262/101 (EP) - B32B2315/085 (EP) - B32B2317/02 (EP) - B32B2419/04 (EP) - B32B2471/00 (EP) - C04B2111/00612 (EP) - E04F15/02038 (EP) - E04F2201/0115 (EP)
PA	- (A1 B4) FALQUON GMBH [DE]
TI	- (A1) Floor panel for use as e.g. Sorel cement flooring in residential building, has core including first layer that comprises mixture of magnesium oxide and magnesium chloride with aggregates, to which second and third layers are attached
AB	- (A1) The panel has a covering layer (9) applied on a top surface of a multilayered core (10), and a counter path (3) applied on a lower side of the core. The core includes a first layer (1) that comprises a mixture of magnesium oxide and magnesium chloride with aggregates, to which second and third layers (2, 5) are attached, where the layers are made of glass fiber tissue. The covering layer is made of PVC. The core comprises a fourth layer (6), which consists of a mixture of magnesium oxide and magnesium chloride with aggregates. The aggregates partially consist of lignocellulose. The aggregates are selected from wood flour, wood fiber and/or wood chip. An independent claim is also included for a method for manufacturing a floor panel.

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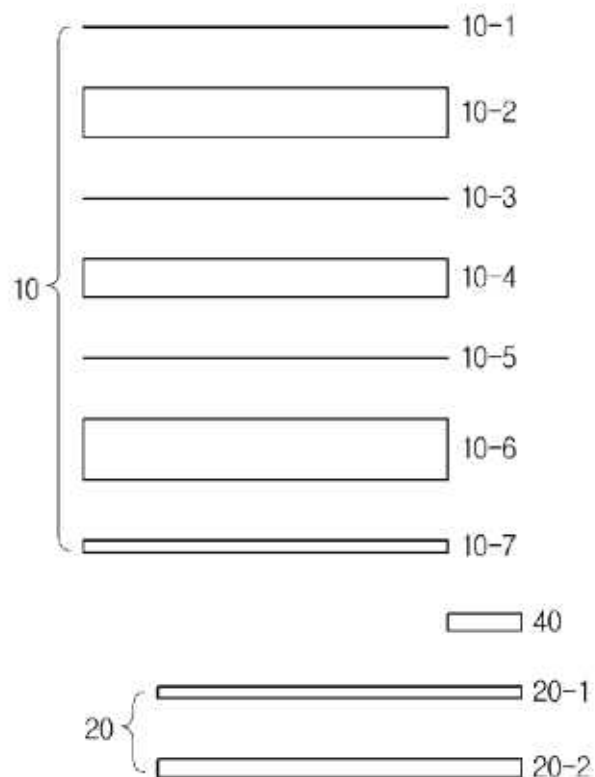
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PR	- KR20110128859 20111205
AP	- KR20110128859 20111205
DT	- I
CI	- B61D17/041 (KR) - B61D17/10 (KR) - E04F15/02 (KR)

- E04F15/0215 (KR)
- E04F15/107 (KR)
- E04F15/18 (KR)
- PA - KRRI [KR]
- TI - **FLOOR** STRUCTURE FOR RAILWAY VEHICLES USED CERAMIC FOAM BOARD
- AB - PURPOSE: A **floor** structure for a railway vehicle using a foamed ceramic board is provided to minimize damage due to a fire by interposing a foamed ceramic board on the **floor** of a railway vehicle to increase fire resistance. CONSTITUTION: A **floor** structure for a railway vehicle using a foamed ceramic board comprises a keystone plate(100), a foamed ceramic board(110), an insulation part(150), a woven **glass fiber** (160), a second aluminum **panel**(140), a first aluminum **panel**(120), and a cover member (130). The keystone plate forms a base frame of the **floor** of a railway vehicle. The foamed ceramic board is arranged above the keystone plate. The insulation part is arranged between the keystone plate and the foamed ceramic board, and is composed of a **glass fiber** or a mineral **fiber**. The woven **glass fiber** is arranged between the foamed ceramic board and the insulation part. The second aluminum **panel** is arranged between the woven **glass fiber** and the insulation part. The first aluminum **panel** is attached to the upside of the foamed ceramic board.

39/84 © EPODOC / EPO

- PN - [US2013142980](#) A1 20130606
- PNFP - US9017785 B2 20150428
- PR - KR20100081283
20100823; WO2011KR06181
20110822
- AP - US201113816853 20110822
- DT - **
- CT - || R141 (A1)
[US7846522](#) B2 20101207 [
] (KAMINSKI ANNEKE MARGARET
[US], et al);
[US2010247834](#) A1 20100930 [
] (BALMER RICHARD H [US], et al)
- || STSE (B2)
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] (KAMINSKI ANNEKE MARGARET
[US], et al);
[US2010247834](#) A1 20100930 [
] (BALMER RICHARD H [US], et al)
- CCI - [B32B3/06](#) ; [B32B7/12](#) ;
[B32B27/08](#) ; [B32B27/12](#) ;
[B32B27/304](#) ; [B32B27/36](#) ;
[B32B37/182](#) ; [E04F15/02](#)
- CCA - [B32B2250/05](#) ; [B32B2250/44](#) ;
[B32B2255/10](#) ; [B32B2262/101](#) ;
[B32B2264/104](#) ; [B32B2307/412](#) ;

[Fig. 5]



[B32B2307/71](#) ; [B32B2307/75](#) ;
[B32B2419/04](#) ; [E04F2203/065](#) ;
[Y10T428/14](#) ; [Y10T428/1486](#)

- CI
- B32B3/06 (EP, US)
 - B32B7/12 (EP, US)
 - B32B27/08 (EP, US)
 - B32B27/12 (EP, US)
 - B32B27/304 (EP, US)
 - B32B27/36 (EP, US)
 - B32B37/182 (EP, US)
 - E04F15/02 (EP, US)
 - E04F15/02155 (US)
- CA
- B32B2250/05 (EP, US)
 - B32B2250/44 (EP, US)
 - B32B2255/10 (EP, US)
 - B32B2262/101 (EP, US)
 - B32B2264/104 (EP, US)
 - B32B2307/412 (EP, US)
 - B32B2307/71 (EP, US)
 - B32B2307/75 (EP, US)
 - B32B2419/04 (EP, US)
 - E04F2203/065 (EP, US)
 - Y10T428/14 (EP, US)
 - Y10T428/1486 (EP, US)
- PA
- (A1)
KO HAE SEUNG [KR]; CHO NAM
YONG [KR]
 - (B2)
KO HAE SEUNG [KR]; CHO NAM
YONG [KR]; LG HAUSYS LTD [KR]
- TI
- (A1)
FLOOR PANEL HAVING ADHESIVE
APPLIED SHEET
 - (B2)
Floor panel having adhesive
applied sheet
- AB
- (A1)
The present invention relates to
a **floor panel** characterized in
that a sheet is laminated to a
tile, and the sheet has an L-
shaped adhesive applied surface
which is exposed at an edge
portion of the tile, the tile
comprises a G/F layer for size

reinforcement and a middle layer formed of a PVC material which is attached to an upper portion of the G/F layer so as to maintain a balance between upper and lower portions, the sheet comprises a PVC sheet and an acrylic adhesive which is applied to one side of the PVC sheet, and the L-shaped adhesive applied surface of the sheet is covered by a protect film And the tile further comprises a print layer attached to an upper portion of the middle layer; a transparent cover layer attached to an upper portion of the print layer; a high strength UV layer stacked on the transparent cover layer; a base layer attached to a lower portion of the G/F layer; and an release layer attached to a lower portion of the base layer.

- (B2)

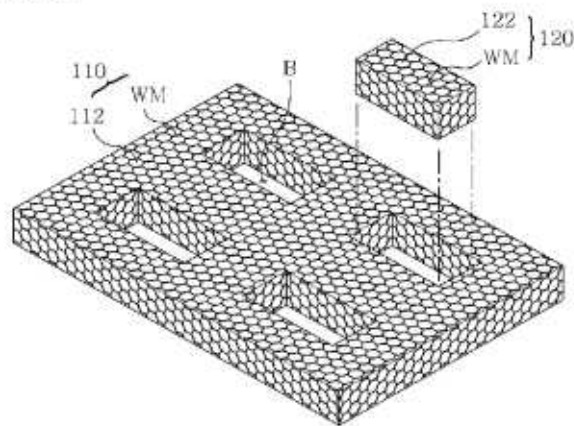
The disclosed is a **floor panel** characterized in that a sheet is laminated to a tile, and the sheet has an L-shaped adhesive applied surface which is exposed at an edge portion of the tile, the tile comprises a **glass fiber** layer for size reinforcement and a middle layer formed of a PVC material which is attached to an upper portion of the **glass fiber** layer impregnated with PVC (Polyvinyl chloride) sol so as to maintain a balance between upper and lower portions, the sheet comprises a PVC sheet and an acrylic adhesive which is applied to one side of the PVC sheet, and the L-shaped adhesive applied surface of the sheet is covered by a protect film.

PR - KR20110041427 20110502
 AP - KR20110041427 20110502
 DT - I
 CI - E04C2/525 (KR)
 - E04F15/02188 (KR)
 - E04F15/182 (KR)
 - E04F15/20 (KR)
 - F24D3/142 (KR)
 CA - E04F2290/023 (KR)
 PA - ADDWELLBEING TECH CO LTD [KR]
 TI - Semi-dry heating **panel** for preventing crack in a bathroom
 AB - PURPOSE: A heating **panel** for a semidry bathroom is provided to prevent cracks by increasing resistance against thermal stress and external loads. CONSTITUTION: A heating **panel** for a semidry bathroom comprises a heating coil(110), a hot water **panel** (120), and a heat medium layer(130). The heating coil comprises an inlet port(111) and an outlet port(112). The hot water **panel** comprises a urethane foam layer(122), a radiating plate(123), an anti-breakage member(124), and a **glass fiber** mesh(125). The urethane foam layer is installed on a **floor** slab(1), and the heating coil is provided in a mounting groove(121) of the urethane foam layer. The radiating plate installed on the urethane foam layer and emits heat from the heating coil. The heating coil is fixed with an aluminum tape(126), and is closely attached to a lower surface of the radiating plate. The anti-breakage member is made of polyethylene. **Glass fiber** rods are horizontally and vertically placed on the anti-breakage member, and a **glass fiber** mesh is formed. The heat medium layer is formed on the hot water **panel**.

41/84 © EPODOC / EPO

PN - [WO2012074204](#) A2 20120607
 PNFP - WO2012074204 A3 20120726
 PR - KR20100119577 20101129
 AP - WO2011KR08022 20111026
 DT - *; Rep
 CT - |KR| ISR (A3)
[KR100778359B](#) B1 00000000
 [A] (KIM, GI HYUN);
[KR100735576B](#) B1 00000000
 [A] (KIM, GI TAE);
[KR20030082662](#) A 00000000
 [A] (CHOI, KYU WON ET AL.);
[US7743568](#) B1 00000000
 [A] (MARS MONTGOMERY)
 CCI - [E04B1/90](#) ; [E04F13/075](#) ;
[E04F13/0875](#)
 CI - E04B1/90 (EP)
 - E04F13/075 (EP)
 - E04F13/0875 (EP)

[Fig. 1]

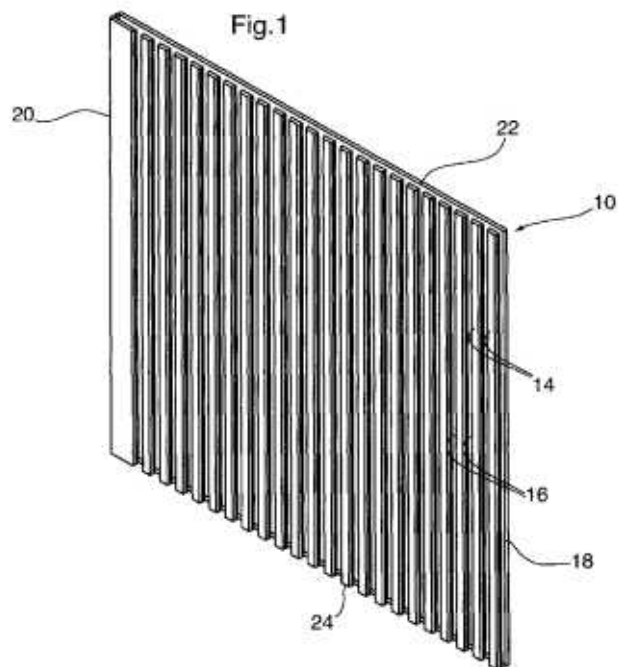


PA	- (A2 A3) KWON HYUK JUN [KR]
TI	- (A2 A3) SOUNDPROOFING AND INSULATING PANEL UNIT AND WALL AND FLOOR STRUCTURE USING SAME
AB	- (A2 A3) The present invention provides a soundproofing and insulation panel unit (P), which is installed on the wall or the floor , wherein the unit comprises: an external panel (110) that is configured by including an insulator which is generally molded into a plate shape having a plurality of hollow holes (B), and meshes (WM) which enclose the outside of said insulator (112); a plurality of internal panels (12) that have insulators (122) which are molded into a small size in the same shape as said hollow holes (B), and meshes (WM) which enclose the outside of said insulators (122), wherein the internal panels are inserted into said hollow holes (B); and coating mortar (M) which is positioned on the outside of a combination of said external panel (110) and the internal panels (120), wherein the coating mortar is positioned by filling gaps between said internal panels (120) and said hollow holes (B). Further, the invention provides the soundproofing and insulation panel unit (P), wherein: said external panel (110) is a square having a predetermined thickness, and each edge thereof is stepped to correspond to each other such that each edge is engaged with an adjacent external panel (110);

the shape of said hollow holes
(B) is a square; and said meshes
(WM) are **glass fiber** nets.

42/84 © EPODOC / EPO

- PN - [WO2012058745](#) A1 20120510
- PR - WO2010CA01764 20101105
- AP - WO2010CA01764 20101105
- DT - *; Rep
- CT - |CA| ISR (A1)
[CN1532226](#) A 20040929
 [X] (MINGXIN ENVIRONMENT
 SANITARY E [CN]);
[CA2572965](#) A1 20060330
 [X] (MANNINGTON MILLS [US]);
[WO2008053077](#) A1 20080508
 [Y] (WIEMERS HELMUT [FI]);
[US2008187739](#) A1 20080807
 [A] (BAKER CHARLES H [US], et al);
[CN101307185](#) A 20081119
 [A] (JILIN ZISEN DECORATION
 MATERIA [CN])
- CCI - [B29C48/12](#) ; [B29C48/21](#) ;
[E04F15/185](#) ; [F16L59/00](#)
- CCA - [B29K2023/0625](#) ;
[B29K2023/0633](#) ;
[B29K2023/065](#) ; [B29K2023/12](#) ;
[B29K2023/14](#) ; [B29K2027/06](#) ;
[B29K2067/00](#) ; [B29K2075/00](#) ;
[B29K2995/0015](#) ;
[B29K2995/0069](#) ;
[E04B2001/745](#) ; [E04C3/28](#) ;
[E04C3/29](#) ; [Y02A30/244](#)
- CI - B29C48/12 (EP)
 - B29C48/21 (EP)
 - E04F15/185 (EP)
 - F16L59/00 (EP)
- CA - B29K2023/0625 (EP)
 - B29K2023/0633 (EP)
 - B29K2023/065 (EP)
 - B29K2023/12 (EP)
 - B29K2023/14 (EP)
 - B29K2027/06 (EP)
 - B29K2067/00 (EP)
 - B29K2075/00 (EP)
 - B29K2995/0015 (EP)



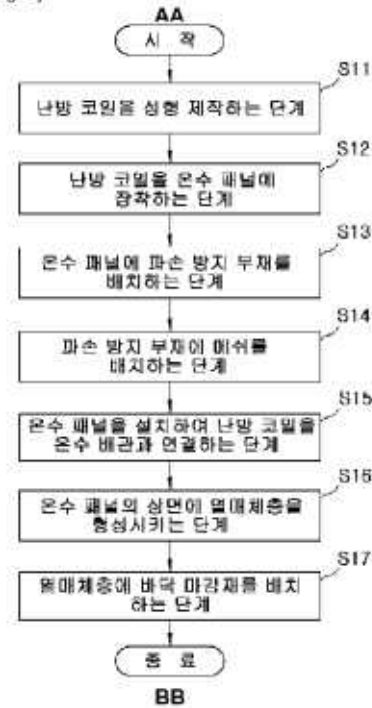
	- B29K2995/0069 (EP)
	- E04B2001/745 (EP)
	- E04C3/28 (EP)
	- E04C3/29 (EP)
	- Y02A30/244 (EP)
PA	- DE ZEN VIC [CA]
TI	- EXTRUSION PROCESS AND PRODUCT
AB	- A thermal insulating and substantially moisture impermeable rigid extrusion comprising 40 to 75 wt% rice husks, a coupling agent, a lubricant, a plasticizer, and the balance a thermoplastic plastic, preferably a thermoplastic polyolefin plastic selected from the group consisting of high density polyethylene, low density polyethylene, linear low density polyethylene, homopolymer polypropylene, copolymer polypropylene, and combinations thereof. The rigid extrusion may be an elongated strip in the shape of a panel , a sheet, a board, a stud, a door frame jamb, a door frame header, an I-beam, a hollow post or beam with partially or fully encapsulated glass fibre reinforcing, a baseboard, a quarter-round, a cove molding, a fascia or a soffit. A preferred rigid extrusion has longitudinal tongue and groove side edges and longitudinal ribs and recesses formed across a face thereof substantially from one side edge to the other. The extrusion may be cut transversely to form a rectangular floor panel having a transverse tongue formed in one end and a mating groove formed in the other end for assembly of abutting panels together side-by-side and end-to-end to produce a

continuous **floor** surface
adapted for assembly with the
ribbed surface facing
downwardly.

43/84 © EPODOC / EPO

- PN - [WO2012036423](#) A2 20120322
- PNFP - WO2012036423 A3 20120531
- PR - KR20100090686 20100915
- AP - WO2011KR06691 20110909
- DT - *; Rep
- CT - |KR| ISR (A3)
[KR20060121490](#) A 20061129
[X] (HYUNDAI CONSTRUCTION CO LTD [KR], et al);
[KR100648600B](#) B1 20061124
[A] (ADDWELLBEING TECH CO LTD [KR]);
[KR20030037896](#) A 20030516
[A] (SHIN DOU CHOEL [KR]);
[KR100472088B](#) B1 20050309
[A] (JIN, KUM SOO);
[JP2000334889](#) A 20001205
[A] (NODA CORP)
- CCI - [F24D3/142](#) ; [F24D3/148](#)
- CCA - [E04F2290/023](#) ; [Y02B30/00](#)
- CI - F24D3/142 (EP)
F24D3/148 (EP)
- CA - E04F2290/023 (EP)
Y02B30/00 (EP)
- PA - (A2 A3)
ADDWELLBEING TECH CO LTD [KR];
NAM WOO-DONG [KR]
- TI - (A2 A3)
METHOD FOR **FLOOR** HEATING
FOR BATHROOM
- AB - (A2 A3)
The present invention relates to a
method for **floor** heating for a
bathroom, and the method
comprises the steps of: molding
and manufacturing an integrated
heating coil, which is made of a
hard plastic material and has a
water inlet hole and a water
outlet hole; mounting the heating

[Fig. 3]



AA ... Start

BB ... End

S11 ... Heating coil is molded and manufactured

S12 ... Heating coil is mounted on hot water panel

S13 ... Damage prevention member is disposed on hot water panel

S14 ... Mesh is disposed on damage prevention member

S15 ... Hot water panel is installed to connect heating coil with hot water pipe

S16 ... Heating medium layer is formed on upper side of hot water panel

S17 ... Floor finishing materials are disposed at heating medium layer

coil in a mounting groove, which is formed on a hot water **panel**; disposing, on the upper side of the hot water **panel**, a damage prevention member in the form of a vinyl sheet in order to enable a relative thermal expansion with another member; disposing a **glass fiber** mesh on the upper side of the damage prevention member; installing the hot water **panel**, which contains the damage prevention member and the **glass fiber** mesh, on a **floor** slab, and connecting the heating coil with a hot water pipe that is installed in a bathroom; and forming a heating medium layer on the upper side of the hot water **panel**, on which the damage prevention member and the **glass fiber** mesh are positioned. According to the present invention, the heating coil is molded and manufactured in such a manner that the heating coil is simply assembled and installed, thereby reducing effort and time for construction. Further, since the heating coil is stably fixed, movement, distortion, and deformation of the heating coil are prevented after construction whereby excellent durability is obtained and superior heating efficiency is accomplished.

44/84 © EPODOC / EPO
 PN - [CN102287034](#) A 20111221
 PNFP - CN102287034B B 20130213
 PR - CN201110179250 20110629
 AP - CN201110179250 20110629
 DT - I
 CT - || STSE (A)
[CN201276671Y](#) Y 00000000 [A]
 [A] 1-10
 * 全文 *;

	JP2002089004 A 00000000 [A] [A] 1-10 * 全文 *; CN2761736Y Y 00000000 [A] [A] 1-10 * 全文 *; CN201330480Y Y 00000000 [A] [A] 1-10 * 全文 *; CN2168907Y Y 00000000 [A] [A] 1-10 * 全文 *; CN101906858 A 00000000 [A] [A] 1-10 * 全文 *; CN2700447Y Y 00000000 [A] [A] 1-10 * 全文 *
CTNP	- STSE (A) [A] - 熊吉如等, "双曲面超大轻型GRC板在天津港数字化建构工程中的应用", 《建筑技艺》, (20100731), no. 7, pages 114 - 117 [A] 1-10 * 114-117 * [A] - 董志龙等, "大块GRC板干挂幕墙的设计与施工技术", 《建筑技术》, (20060930), vol. 37, no. 9, pages 668 - 670 [A] 1-10 * 668-670 *
PA	- (A B) 3RD CONSTRUCTION ENG CO LTD OF CHINA CONSTRUCTION 2ND ENG BUREAU
TI	- (A B) Special-shaped rail and construction method thereof
AB	- (A) The invention relates to a special-shaped rail and a construction method thereof. The special-shaped rail is connected to an inner arc edge of a structure floor plate, and a main body structure consists of support frames, vertical keels, horizontal keels, a back plate, a glass-fiber reinforced composite (GRC) panel and a handrail; the support frames are arranged along the inner arc edge of the structure floor plate at intervals; the vertical keels are arranged on the support frames between the back plate and the GRC panel; the horizontal keels are distributed along the upper, middle and lower parts of the back plate at intervals, connected among the vertical keels and fixed with the back plate; the GRC panel is formed by horizontally splicing a plurality of GRC plates; the vertical section of the back plate is a curved surface; and a layer of steel plate net is connected to and a cement mortar coating decoration layer is paved on the inner surface of the back plate. The GRC plates are molded into a special-shaped structure for the construction of an indoor rail, and the rail has a novel and unique shape and elegant appearance, accords with the idea about the shape of the indoor rail of a designer and an owner on the basis that the function of the rail is realized, and creates a more abundant shape effect in an indoor space.

45/84 © EPODOC / EPO

- PN - [KR20110094943](#) A 20110824
- PR - KR20100014686 20100218
- AP - KR20100014686 20100218
- DT - I
- CCA - [Y02B30/00](#) ; [Y02E60/14](#)
- CI - E04F15/06 (KR)
- E04F15/08 (KR)
- F24D3/148 (KR)
- F24D3/149 (KR)
- F28D20/0056 (KR)
- F28D20/02 (KR)
- CA - F24D2220/10 (KR)
- Y02B30/00 (EP)
- Y02E60/14 (EP)
- PA - KIM IK SOO [KR]
- TI - HOT WATER HEATING **FLOOR PANEL** AND METHOD OF CALCULATING MORTAR FINISHING HEIGHT
- AB - PURPOSE: An ondol **panel** and a method of calculating height of mortar plastering of the ondol **panel** are provided to enable rapid and uniform heat transfer and prevent noise between floors in a residential space using a soundproof member. CONSTITUTION: An ondol **panel** comprises a heat-accumulating and soundproof unit, first and second guide grooves(110) and a fixed protrusion(122). The heat-accumulating and soundproof unit is installed on the inner wall of an elution unit(120) and simultaneously processes heat accumulating and soundproofing. The lower sides of the first and second guide grooves make surface contact with a how-water hose. The fixed protrusion is protruded from the inner wall of the elution unit and fixes the heat-accumulating and soundproof unit. The heat-accumulating and soundproof unit is formed as follows. One of far-infrared emitting materials including crushed stone, ceramic, mica stone, jade, germanium stone, tourmaline is selected and crushed to 0.05mm~5mm. The crushed material is mixed and solidified with one of **glass fiber**, magnesium oxide, calcium oxide and lead oxide.

46/84 © EPODOC / EPO

- PN - [KR101052252B](#) B1 20110727
- PR - KR20100090686 20100915
- AP - KR20100090686 20100915
- DT - I
- CT - || STSE (B1)
[KR100472088B](#) B1 20050309 [];
[KR100648600B](#) B1 20061124 [] (ADDWELLBEING TECH CO LTD [KR]);
[KR20060121490](#) A 20061129 [] (HYUNDAI CONSTRUCTION CO LTD [KR], et al)
- CCI - [F24D3/142](#) ; [F24D3/148](#)

CCA - [E04F2290/023](#) ; [Y02B30/00](#)

CI - F24D3/142 (EP)
- F24D3/148 (EP)

CA - E04F2290/023 (EP)
- Y02B30/00 (EP)

PA - ADDWELLBEING TECH CO LTD [KR]

TI - **FLOOR** HEATING CONSTRUCTION METHOD FOR BATHROOM

AB - PURPOSE: A **floor** heating construction method for a bathroom is provided to reduce the labor and time required for construction by assembling and installing a heating coil simply, and to heighten the quality of a **floor** heating structure by fixing a heating coil stably and preventing the movement or distortion and deformation of a heating coil after construction. CONSTITUTION: A **floor** heating construction method for a bathroom comprises the steps of: manufacturing an integral heating coil having a water inlet and a water outlet with hard plastic materials(S11); mounting the heating coil to a mounting groove formed in a hot water **panel**(S12); arranging a breakage prevention member having the shape of a vinyl sheet on the top of the hot water **panel** to make relative thermal expansion with other members possible(S13); arranging a **glass fiber** mesh on the top of the breakage prevention member(S14); installing the hot water **panel** including the breakage prevention member and the **glass fiber** mesh on a **floor** slab, and connecting the heating coil with a hot water pipeline installed to a bathroom(S15); and forming a heat medium on the top of the hot water **panel** where the breakage prevention member and the **glass fiber** mesh are located(S16).

47/84 © EPODOC / EPO

PN - [EP2397322](#) A2 20111221

PNFP - EP2397322 A3 20160706
- EP2397322 B1 20180822

PR - DE20102009284U 20100618

AP - EP20110004929 20110616

DT - **

CT - || STSE (A3)
[DE3209520](#) A1 19830929 [YA] (CARL HEINZ ING GRAD)
[Y] 1-5,8,11,12,14
* page 7, lines 6-20; figures 1,2 *
[A] 9,10,13,15,16;
[DE2814004](#) A1 19791011 [YA] (WOERMANN BAUCHEMIE HOLDING AG)
[Y] 1-8,11,12,14
* page 11, paragraph letzter - page 12, paragraph zweiter; figure 1 *
[A] 9,10,13,15,16;
[XP002755927](#) A[Y];
[EP0666383](#) A1 19950809 [Y] (STEINER MARTIN [AT])
[Y] 8,11,12
* column 3, line 51 - column 4, line 26; figures 1,2 *;
[AT6507U](#) U1 20031125 [A] (BUEHRINGER WOLFGANG [AT])
[A] 1-15
* the whole document *;

	US2010010139 A1 20100114 [A] (DAVIDOVITS JOSEPH [FR], et al) [A] 1-15 * the whole document *; DE29620051U U1 19970417 [A] (BIEDERMANN JUTTA [DE], et al) [A] 1-15 * the whole document *
CTNP	- STSE (A3) [Y] - Anonymous, "VDB-Information", no. 87/01, (20011201), Verband Deutscher Betoningenieure E. V., URL: http://www.betoningenieure.de/Downloads/info87_01.pdf, (20160330), XP002755927 [Y] 1-8,11,12,14 * the whole document *
CCI	- B32B3/08 ; B32B5/18 ; B32B5/24 ; B32B5/26 ; B32B13/04 ; E04C2/525 ; E04F15/02 ; F24D3/142 ; F24F5/0089 ; F24F5/0092
CCA	- E04F2290/023 ; Y02B30/00
CI	- B32B3/08 (EP) - B32B5/18 (EP) - B32B5/24 (EP) - B32B5/26 (EP) - B32B13/04 (EP) - E04C2/525 (EP) - E04F15/02 (EP) - F24D3/142 (EP) - F24F5/0089 (EP) - F24F5/0092 (EP)
CA	- E04F2290/023 (EP) - Y02B30/00 (EP)
PA	- (A2 A3) PLAN GMBH M [DE] - (B1) SANHA GMBH & CO KG [DE]
TI	- (A2 A3 B1) Construction board with embedded pipeline conduit for a heating or cooling fluid
AB	- (A2) The panel (100) has a pipe line (2) with hot or cold fluid for space heating or cooling while mounting on a wall, a ceiling or a floor. A core layer (1) consists of a foam glass plate, and a reinforcing layer (6) made of a fiber glass mat is provided at a rear side of the core layer. The pipe line partially lies at a front side of the core layer or partially embedded on an outer surface of the front side of the core layer. The pipe line is provided with metal selected from corrosion-free steel and copper, and is formed as a connecting pipe.
48/84	© EPODOC / EPO
PN	- CA2713510 A1 20110220
PR	- US20090272138P 20090820

AP	- CA20102713510 20100818
DT	- I
CCI	- B29C48/001 ; B29C48/07 ; B29C48/11 ; B29C48/18 ; C08L23/0846
CCA	- B29C48/0022 ; B29C48/13 ; B29C48/15 ; B29K2023/0625 ; B29K2023/0633 ; B29K2023/065 ; B29K2023/12 ; B29L2031/003 ; Y10T428/2457 ; Y10T428/24579
CLC	- C08L23/0846 , C08L2666/02 , INV
CI	- B29C48/001 (EP, US) - B29C48/07 (EP, US) - B29C48/11 (EP, US) - B29C48/18 (EP, US) - C08L23/0846 (EP, US)
CA	- B29C48/0022 (EP, US) - B29C48/13 (EP, US) - B29C48/15 (EP, US) - B29K2023/0625 (EP, US) - B29K2023/0633 (EP, US) - B29K2023/065 (EP, US) - B29K2023/12 (EP, US) - B29L2031/003 (EP, US) - Y10T428/2457 (EP, US) - Y10T428/24579 (EP, US)
CL	- C08L23/0846, C08L2666/02, INV (EP, US)
PA	- DE ZEN VIC [CA]
TI	- EXTRUSION PROCESS AND PRODUCT
AB	- A thermal insulating and substantially moisture impermeable rigid extrusion comprising 40 to 75 wt% rice husks, a coupling agent, a lubricant, a plasticizer, and the balance a thermoplastic plastic, preferably a thermoplastic polyolefin plastic selected from the group consisting of high density polyethylene, low density polyethylene, linear low density polyethylene, homopolymer polypropylene, copolymer polypropylene, and combinations thereof. The rigid extrusion may be an elongated strip in the shape of a panel , a sheet, a board, a stud, a door frame jamb, a door frame header, an I-beam, a hollow post or beam with partially or fully encapsulated glass fibre reinforcing, a baseboard, a quarter-round, a cove molding, a fascia or a soffit. A preferred rigid extrusion has longitudinal tongue and groove side edges and longitudinal ribs and recesses formed across a face thereof substantially from one side edge to the other. The extrusion may be cut transversely to form a rectangular floor panel having a transverse tongue formed in one end and a mating groove formed in the other end for assembly of abutting panels together side-by-side and end-to-end to produce a continuous floor surface adapted for assembly with the ribbed surface facing downwardly.

49/84 © EPODOC / EPO

PN	- CN201367709Y Y 20091223
PR	- CN20092051883U 20090303
AP	- CN20092051883U 20090303

DT - I

PA - GUANGNING YAO [CN]

TI - Fireproof **floor** slab

AB - A fireproof **floor** slab comprises a first **panel**, a middle interlayer and a second **panel**; the middle interlayer is arranged between the first **panel** and the second **panel**; the middle interlayer, the first **panel** and the second **panel** are coated with adhesive; the first **panel**, the middle interlayer and the second **panel** are pressed and connected into a whole; the first **panel** and the second **panel** can adopt **glass** magnesium fireproof plates or a **fiber** cement plates; and the middle interlayer can adopt a wooden clamp plate. The utility model has the advantages that the first **panel**, the middle interlayer and the second **panel** are coated with adhesive, and pressed and connected into a whole on a cold pressing machine, so that the structure is tight, compact and durable; the first **panel** and the second **panel**, which adopt the **glass** magnesium fireproof plate, can well play the fireproof effect; and the middle wooden clamp plate also can maintain original elasticity and intensity.

50/84 © EPODOC / EPO

PN - [RU2007129009](#) A 20090210

PNFP - RU2358077 C2 20090610

PR - US20040640174P 20041230; US20050647015P 20050127

AP - RU20070129009 20051215

DT - I

PA - (C2)
JUNAJTED STEHJTS DZHIPSUM KOMP [US]

TI - (C2)
FIREPROOF REINFORCED AND LIGHTWEIGHT PANELS BASED ON BINDING AGENT AND METAL WIREFRAME FOR **FLOOR** COVERING

AB - (C2)
FIELD: construction. ^ SUBSTANCE: **floor** covering system contains horizontal metal wire frame elements, for example C-, U-shaped joists, bars where structural reinforced lightweight cement **panel** with stable dimensions is mounted. The **floor** covering system is fire-proof, water resistant, stable to mold, decay, termites and capable of withstanding shearing loads equal to those applied by plywood panels or panels made up from the sheets of directed strands or even more severe loads. Panels use one or several layers of continuous phase achieved by curing water mixture of non-organic binding agent, for example semi-hydrate of calcium sulfate, hydraulic binding agent, active pozzolanic material and lime. The continuous phase is reinforced with **glass fiber** and includes light-weight filling agent particles, for example ceramic micro balloons. ^ EFFECT: improved strength of **floor** covering. ^ 34 cl, 42 tbl, 29 dwg

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PN - [KR100874814B](#) B1 20081219

PR - KR20070068501 20070709

AP - KR20070068501 20070709

DT - I

CI - E04G5/08 (KR)
 PA - HYUN DAI HEAVY IND CO LTD [KR]
 TI - A **FLOOR** MATERIALS FOR SCAFFOLDING STRUCTURE SYSTEM
 AB - A **floor** material for a scaffolding structure is provided to secure excellent durability and field workability, to prevent the increase in the weight of a **panel** and a rise in the unit price effectively, to improve strength and to minimize deformation. A **floor** material (100) installed to a scaffolding structure includes a base **panel** made of sheet type composite materials by having thermoplastic resin to matrix and reinforcing the interval with a **glass fiber** mat, and many ribs(21,22,23) made of same materials and formed on the lower side of the base **panel** integrally. The base **panel** made of the composite materials is formed to a thickness of 6~8mm by 35~50wt% **glass fiber** and thermoplastic resin to have the amount of deformation into 7mm or less, and many ribs having the width of 10~20mm and the height of 8~12mm are installed on the lower part of the base **panel** at regular intervals.

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PN - [CN201184038Y](#) Y 20090121
 PR - CN200720131491U 20071214
 AP - CN200720131491U 20071214
 DT - I
 PA - HONGXIANG QIU [CN]
 TI - Movable splicing lay type natural stone composite type **floor**
 AB - The utility model relates to a building decoration material, in particular to a moving assembling and paving type natural stone composite **floor** which has an aluminum honeycomb reinforcing plate and a stone **panel**. The aluminum honeycomb reinforcing plate is formed by two **glass fiber** fabrics and an aluminum honeycomb core in a pasting way, the aluminum honeycomb reinforcing plate is adhered to the stone **panel**, the four side surfaces at the periphery of the **floor** are provided with connecting blocks which are made of epoxy adhesives, wherein, the connecting block of two adjacent side surfaces is provided with a tenon, and the connecting block of the other two adjacent side surfaces is provided with a groove. A stone honeycomb plate is adopted to make the **floor** having light weight and high intensity, and tenon grooves at the periphery of the **floor** are made by adopting special epoxy adhesives, therefore, the moving assembling and paving type natural stone composite **floor** has the advantages of favorable water prevention and moisture prevention performance, convenient construction, simpleness, rapidness and installation material cost conservation, and can be repeatedly dismantled for moving use.

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PN - [NL7702267](#) A 19780905
 PR - NL19770002267 19770303
 AP - NL19770002267 19770303
 DT - *; Rep
 CCI - [B32B3/266](#) ; [E04F13/185](#) ; [E04F15/10](#)
 CI - B32B3/266 (EP)

	- B32B27/06 (US)
	- B32B27/36 (US)
	- E04F13/185 (EP)
	- E04F15/10 (EP)
CA	- B32B2262/101 (US)
	- B32B2305/08 (US)
	- B32B2607/00 (US)
PA	- PETRUSJOHANNESLANKRIJER
TI	- Building panels for wall and floor covering - produced by coating hardboard with glass fibre reinforced polyester resin
AB	- A building panel , esp. a board or plate for cladding walls or floors, consists of a carrier sheet with a coating layer of synthetic resin, esp. a polyester reinforced with glass fibres. A mould is used to form a thin, flat layer of synthetic material and this is bonded to the carrier plate. The carrier has perforations and is placed directly on to the still plasticised layer in the mould, and the assembly is allowed to set. Method produces building panels without requiring an expensive plant generating high pressure and/or expensive synthetic resins.

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PN	- KR20040046842 A 20040605
PNFP	- KR100491732B B1 20050525
PR	- KR20020074878 20021128
AP	- KR20020074878 20021128
DT	- I
CT	- STSE (B1) KR20020068626 A 20020828 [] (LG CHEMICAL LTD [KR]); KR20020056815 A 20020710 [] (LG CHEMICAL LTD [KR]); KR19980010938U U 19980525 []; JP2001263690 A 20010926 [] (EIDAI CO LTD); KR20000001002 A 20000115 [] (KANG NAM CO LTD [KR]); KR0147441B B1 19980801 [] (LG CHEMICAL LTD [KR]); JPH05278029 A 19931026 []
CI	- E04C2/26 (KR)
PA	- (A) GEOSYS CO
TI	- (A B1) Panel for raised access floor and manufacturing method thereof
AB	- (A) PURPOSE: A panel for a double flooring is provided to decrease the term and cost required for construction and to recycle resources by utilizing waste materials such as waste glass . CONSTITUTION: The panel for a double flooring contains: a surface layer (10) formed by an admixture composed of unsaturated polyester resins, hardener, thickener, limestone, sand and waste glass to function as a finishing member; a SMC layer(30) composed of an unsaturated polyester sheet mold compound; a GFS layer(20) formed between the SMC layer(30) and the surface layer to prevent the SMC layer(30)

from projecting to the surface layer and composed of a **glass fiber** sheet; and a latticed rib(40) located on the lower part of the SMC layer(30) to improve the strength of a **panel** and composed of an unsaturated polyester sheet mold compound. The surface layer (10), the GFS layer(20), the SMC layer(30) and the rib(40) are shaped in one.

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- PN - [JP2006183246](#) A 20060713
- PR - JP20040375151 20041227
- AP - JP20040375151 20041227
- DT - I
- FI - E04B1/00&501J; E04F11/18; E04F13/14&102C
- FT - 2E101/GG07; 2E101/HH18; 2E101/JJ02; 2E101/JJ04; 2E101/JJ12; 2E101/LL02; 2E101/LL14; 2E101/LL15; 2E101/LL22; 2E101/NN01; 2E101/NN13; 2E101/NN26; 2E101/NN32; 2E101/NN36; 2E110/AA41; 2E110/AA46; 2E110/AA50; 2E110/AA51; 2E110/AB04; 2E110/AB14; 2E110/AB22; 2E110/BA02; 2E110/BA13; 2E110/BB22; 2E110/BC07; 2E110/BC09; 2E110/BC12; 2E110/BD12; 2E110/BD13; 2E110/BD16; 2E110/BD23; 2E110/CA08; 2E110/CC02; 2E110/CC04; 2E110/CC06; 2E110/CC15; 2E110/DA10; 2E110/DB13; 2E110/DC12; 2E110/DD09; 2E110/EA01; 2E110/GA33X; 2E110/GA34W; 2E110/GB02Z; 2E110/GB06Y; 2E110/GB06Z; 2E110/GB23X; 2E110/GB28W; 2E110/GB32X; 2E301/GG07; 2E301/HH18; 2E301/JJ02; 2E301/JJ04; 2E301/JJ12; 2E301/LL02; 2E301/LL14; 2E301/LL15; 2E301/LL22; 2E301/NN01; 2E301/NN13; 2E301/NN26; 2E301/NN32; 2E301/NN36
- PA - SEIKO INDUSTRY CO LTD; NIHON FUNEN CO LTD
- TI - MOUNTING DEVICE FOR HANDRAIL WALL TILED **PANEL**
- AB - PROBLEM TO BE SOLVED: To provide a mounting device for a handrail wall tiled **panel**, which can reduce the weight of the handrail wall **panel** and facilitates replacement of the same in a short time.
- SOLUTION: The mounting device for the handrail tiled **panel** is constructed by erecting a plurality of veranda supports 11 on the outside of a **floor** skeleton, arranging facing covers 16 so as to cover the outside of the **floor** skeleton 10, and mounting the tiled panels P1 on the facing covers 16 over areas between the veranda supports 11. The tiled **panel** P1 includes a wall main body 1 formed of **glass fiber**-containing concrete, surface decorative tiles 2 arranged on a front surface of the wall main body 1 in one body with the same, and side frame members 3R, 3L which each have the entire thickness thereof embedded in the wall main body 1 along the entire length of each of right and left short sides of the wall main body 1 and each have a fitted portion on an external side thereof. Then each veranda support 11 has vertical rail members 21 arranged thereon, for slidably fitting to the fitted portions of the right and left side frame members 3R, 3L, and the decorative cover member 16 has a **panel** bearing member arranged thereon, which is fitted to a lower side of the tiled **panel** P1 to bear the same.
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- PN - [JP2005273272](#) A 20051006
- PNFP - JP4310781B B2 20090812

PR - JP20040087486 20040324

AP - JP20040087486 20040324

DT - I

FI - A47G27/02&102; E04F15/16&A

FT - 2E220/AA09; 2E220/AA14; 2E220/AA16; 2E220/AA36; 2E220/AA55; 2E220/AB08;
2E220/AC03; 2E220/BA01; 2E220/DA02; 2E220/DB09; 2E220/EA03; 2E220/GA02Y;
2E220/GA07X; 2E220/GA22X; 2E220/GA26X; 2E220/GA27X; 2E220/GA28X;
2E220/GB28X; 2E220/GB32Z; 2E220/GB33X; 2E220/GB34X; 3B120/AA30; 3B120/BA03;
3B120/DB01; 3B120/EA09; 3B120/EB22

PA - (A)
SUMINOE TEXTILE; TAISEI CORP

TI - (A)
GAS PERMEABLE TILE CARPET AND ITS MANUFACTURING METHOD

AB - (A)
PROBLEM TO BE SOLVED: To provide a tile carpet and its manufacturing method for securing an adhesive property of a porous **floor panel** and a gas permeable tile carpet, securing adhesive durability of a generator of a surface layer and nonwoven fabric of a reverse surface layer, hardly causing extraction of pile by sufficiently providing pile extraction strength, satisfying a reference of chair caster performance, endurable against in-plane shearing force for transmitting shearing force by a dynamic load such as walking and a caster to a reverse surface from a tile carpet surface, rich in bendable performance in the out-of-plane direction while having elasticity in the in-plane direction capable of restricting the movement of a **floor panel** by walking, having fit performance and high gas permeability easily becoming familiar with a step height and wiring of the porous **floor panel**.
- (A)
SOLUTION: This carpet is laminated and adhered by interposing **glass fiber** woven cloth or the nonwoven fabric between the generator for preforming pre-coat processing so as not to form a film for forming a surface side layer of the carpet and the nonwoven fabric for forming a reverse surface side layer of the carpet. The carpet is constituted so that the generator and the nonwoven fabric are integrally adhered via an adhesive layer formed by partially fusing mutual small masses formed by fusing mutual thermoplastic resin powders so as to have a void communicating up to the reverse surface side from the surface side of the carpet.
- (A)
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PN - [JPH04209254](#) A 19920730

PNFP - JP2627680B B2 19970709

PR - JP19900339922 19901130

AP - JP19900339922 19901130

DT - I

FI - B32B21/08; B32B21/10; B32B25/04; B32B27/12; E04F15/04&601B; E04F15/18&601B;
E04F15/18&602H; E04F15/18&602M

- FT - 2E220/AA19; 2E220/AA23; 2E220/AA26; 2E220/AA37; 2E220/AA44; 2E220/AA51; 2E220/AA55; 2E220/AB06; 2E220/AB08; 2E220/AC03; 2E220/BA23; 2E220/BB03; 2E220/BC06; 2E220/CA07; 2E220/DA02; 2E220/DA03; 2E220/DA05; 2E220/DA13; 2E220/DA19; 2E220/DB09; 2E220/DB13; 2E220/EA03; 2E220/EA11; 2E220/FA05; 2E220/FA11; 2E220/GA09Y; 2E220/GA22X; 2E220/GA22Y; 2E220/GA24X; 2E220/GA25X; 2E220/GA25Y; 2E220/GA27Y; 2E220/GA28X; 2E220/GB22Z; 2E220/GB28Y; 2E220/GB32Y; 2E220/GB32Z; 2E220/GB33X; 2E220/GB34Z; 2E220/GB37Z; 2E220/GB38Z; 2E220/GB39X; 2E220/GB39Z; 2E220/GB43X; 2E220/GB44X; 2E220/GB45X; 2E220/GB46X; 2E220/GB46Y; 2E220/GB47X; 4F100/AG00E; 4F100/AK01C; 4F100/AK01E; 4F100/AK02G; 4F100/AK02K; 4F100/AN00C; 4F100/AN00E; 4F100/AP00B; 4F100/AP00D; 4F100/AP00E; 4F100/AP01A; 4F100/AP01K; 4F100/AP02; 4F100/AP03E; 4F100/BA05; 4F100/BA07; 4F100/BA08; 4F100/BA10A; 4F100/BA10E; 4F100/BA13; 4F100/CB00; 4F100/DB03; 4F100/DC11E; 4F100/DC16E; 4F100/DD07E; 4F100/DG01E; 4F100/DG06E; 4F100/DG11E; 4F100/DG15; 4F100/GA04; 4F100/GB08; 4F100/HA00A; 4F100/HA00B; 4F100/HB00A; 4F100/HB00B; 4F100/JH01; 4F100/JH02; 4F100/JL00; 4F100/JL01; 4F100/JM02A
- PA - (A)
DANTANI PLYWOOD CO
- TI - (A)
WOODEN SOUNDPROOF **FLOOR** STRUCTURE
- AB - (A)
PURPOSE: To raise the soundproofing effect of a **floor** structure by a method in which a surface material formed by laminating a wooden decorating plate, a rubber sheet, and a wooden base plate is bonded to a base **panel** formed by laminating a wooden base plate and **glass** wool to form a **floor** material, and the **floor** material is directly bonded to the **floor** slab. CONSTITUTION: A decorating single plate, a wooden decorating plate, a rubber or synthetic resin sheet-wooden base plate double layer, and a cloth are laminated in order from the surface side to form a surface material A. A wooden base plate 8 is laminated with a plastic **fiber** three-dimensional network structure 9 and the laminate is laminated with a **glass** wool 10 as the lowest layer to form a base **panel**. The base **panel** is bonded to the surface material A and the base **panel** is bonded to concrete **floor** slab. **Floor** having excellent walking feeling and good soundproofing effect can thus be obtained.

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- AP - JP19960316968 19961113
- DT - I
- FI - B32B27/12; B32B27/40; B32B5/18; E04F15/10&104A
- FT - 2E220/AA04; 2E220/AA19; 2E220/AA26; 2E220/AA44; 2E220/AB03; 2E220/BA01; 2E220/EA01; 2E220/FA05; 2E220/GA03X; 2E220/GA04X; 2E220/GA07X; 2E220/GA22X; 2E220/GA25X; 2E220/GA27X; 2E220/GA28X; 2E220/GB11X; 2E220/GB28X; 2E220/GB31X; 2E220/GB32X; 2E220/GB33X; 2E220/GB34X; 2E220/GB35X; 2E220/GB37X; 4F100/AG00; 4F100/AK01A; 4F100/AK01C; 4F100/AK15; 4F100/AK51B; 4F100/BA03; 4F100/BA04; 4F100/BA07; 4F100/BA10A; 4F100/BA10C; 4F100/DG06C; 4F100/DG15; 4F100/DJ01; 4F100/DJ02B; 4F100/EJ82C; 4F100/GB08; 4F100/JD05C; 4F100/JH01; 4F100/JH02; 4F100/JJ02; 4F100/JK10; 4F100/JK13B; 4F100/YY00;

4F100/YY00B

PA - TAJIMA INC

TI - **PANEL-SHAPED CUSHION FLOOR MATERIAL**

AB - PROBLEM TO BE SOLVED: To improve the noise insulation by providing a **panel**-shaped cushion **floor** material to be used in a toilet of a multiple dwelling house in which a surface layer made of a synthetic resin, a foamed layer of the prescribed hardness, and a **fiber**-reinforced layer are laminated so that the total impact value is kept at a prescribed value. SOLUTION: A closed cell foamed layer made of soft polyurethane of 20-80 in ASKA hardness is laminated on a back side of a sheet on which letters and patterns are printed and which is made of vinyl chloride resin, polyester resin, or polyolefine resin. In addition, a synthetic resin layer reinforced by a **glass**-reinforced non-woven fabric or the like is laminated inside and/or on the lower side of the foamed layer to form a **panel**-shaped cushion **floor** material so that the impact acceleration G is 70-100 as a whole. The cushion property, the restoration property of a recess to the load, the heat insulation property, and the vibration control property and the sound insulating property are improved, and the water warpage is prevented. The noise in a toilet, etc., of a multiple dwelling house can be prevented.

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PN - [JPH06185189](#) A 19940705

PR - JP19920309658 19921022

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DT - I

FI - E04B1/94&Y; E04F15/024&601Z

FT - 2E001/DE06; 2E001/DH39; 2E001/FA11; 2E001/GA06; 2E001/GA07; 2E001/GA12; 2E001/GA25; 2E001/GA27; 2E001/GA28; 2E001/GA29; 2E001/GA42; 2E001/GA82; 2E001/HB01; 2E001/HB02; 2E001/HD03; 2E001/HD04; 2E001/HD08; 2E001/HD09; 2E001/JA22; 2E001/JA28; 2E001/JA29; 2E001/JB07; 2E001/JD04; 2E001/JD05; 2E001/LA04; 2E129/AA14; 2E129/CA53; 2E129/CA54; 2E129/CA56; 2E129/CA58; 2E129/CA59; 2E129/CB03; 2E129/CD03; 2E129/CD08; 2E129/CD09; 2E129/CD19; 2E129/DA09; 2E129/DA21; 2E129/DA22; 2E129/DA28; 2E129/DA29; 2E129/DB07; 2E129/DD02; 2E129/DD04; 2E220/AA02; 2E220/AA23; 2E220/AA25; 2E220/AA26; 2E220/AA36; 2E220/AA44; 2E220/AB08; 2E220/CA07; 2E220/EA11; 2E220/FA01; 2E220/FA07; 2E220/GA02Y; 2E220/GA12Y; 2E220/GA22Y; 2E220/GA25Y; 2E220/GA27Y; 2E220/GA28Y; 2E220/GB01Y; 2E220/GB02Y; 2E220/GB11Y; 2E220/GB25Y; 2E220/GB28Y; 2E220/GB32Y; 2E220/GB33Y; 2E220/GB37Y; 2E220/GB38Y

PA - KANEBO LTD; TOWA KOGYO KK

TI - LIGHT-WEIGHT **FLOOR MATERIAL** AND MANUFACTURE THEREOF

AB - PURPOSE: To manufacture an incombustible, and light-weight **floor** material by charging the bottom of the center part of a tray made of metal sheet integrally with self-extinguishing foaming plastics containing **fiber**-reinforced material. CONSTITUTION: A tray-like structure is formed on a metal sheet, an adhesive material is applied to the inside surface of this tray, and then a mesh-shake **glass fiber**-woven fabric is placed and stuck there on. Then, the opening surface of the tray-like structure is covered with a cover made of a metal sheet to form a flat **panel**, and then a mixture of polyol and diisocyanate is injected into the center part of the flat **panel** to be reaction-cured and

foamed to form a light-weight **floor** material. Thus, a **floor** material having high breaking strength and capable of reducing deflection against a load, can be obtained.

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PN - [JPH0691833](#) A 19940405

PR - JP19910268599 19910920

AP - JP19910268599 19910920

DT - I

FI - B32B31/00; B32B37/00; E04F15/08&A

FT - 2E220/AA07; 2E220/AA11; 2E220/AA23; 2E220/AA25; 2E220/AA39; 2E220/AB12; 2E220/AB14; 2E220/EA02; 2E220/FA02; 2E220/GA07X; 2E220/GA12X; 2E220/GA22X; 2E220/GA24X; 2E220/GA25X; 2E220/GA27X; 2E220/GA30X; 2E220/GB11X; 2E220/GB14X; 2E220/GB28X; 2E220/GB31X; 2E220/GB32X; 2E220/GB35X; 2E220/GB37X; 2E220/GB38X; 4F100/AA00; 4F100/AA00C; 4F100/AA08H; 4F100/AA19H; 4F100/AD11A; 4F100/AD11B; 4F100/AG00A; 4F100/AG00B; 4F100/AK01A; 4F100/AK01C; 4F100/AK33; 4F100/AK36; 4F100/BA03; 4F100/BA05; 4F100/BA07; 4F100/BA10A; 4F100/BA10C; 4F100/CA23; 4F100/DE01C; 4F100/DG01A; 4F100/DG03B; 4F100/DG06B; 4F100/DG12A; 4F100/DH01; 4F100/EA031; 4F100/EA051; 4F100/EG002; 4F100/EH762; 4F100/EJ172; 4F100/EJ422; 4F100/EJ82A; 4F100/GB07; 4F100/GB08; 4F100/JB13A; 4F100/JB13C; 4F100/JK01; 4F100/JK04; 4F100/JK07; 4F100/JK20; 4F100/JL00; 4F100/JL01

PA - NIPPON STEEL CHEMICAL CO

TI - PRODUCTION OF COMPOSITE **PANEL**

AB - PURPOSE:To obtain a composite **panel** light in weight, superior in durability and processability, and improved in fracture toughness required esp. as **floor** covering materials by a method wherein **glass** short **fiber** chopped strands are spreaded to be laminated on a **glass** cloth impregnated with a thermosetting resin and thereon a dry powder composition-spreaded layer is provided. CONSTITUTION:A **glass** or carbon **fiber**-made cloth 1 previously impregnated with a thermosetting resin is placed on a release sheet. Thereon, **glass** or carbon short **fiber** chopped strands 2 are spreaded in a two-dimensionally random manner to be laminated. In this manner, a mat is formed. Thereon, a dry powder composition 3 mainly composed of an inorganic powder body and a thermosetting resin is further spreaded. This laminate mat having a multilayer structure is inserted to a hot press to be pressed under heat for a predetermined time. In this manner, the thermoplastic resin is reacted to be cured, and the inorganic powders are so tightly compressed that voids are reduced. Thus, the obtained composite has a multilayer structure in which the reinforcing short fibers and the inorganic light-weight aggregate are securely bonded with each other.