

[SS 37] ..fi

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[EPODOC: SS 37] FLOOR AND DRAIN AND ASSEMBLY

Results in EPODOC 556

[SS 38] ((DRAIN AND FLOOR) AND (PIPE AND PRESSURE AND TESTING))

Results in EPODOC 1

[SS 39] DRAIN AND TOP AND TESTING AND PIPE

Results in EPODOC 92

[SS 40] 39 AND 37

Results in EPODOC 1

[SS 41] ..LI



1/1 © EPODOC / EPO

PN - [CN204255638U](#) U 20150408

PR - CN20142804429U 20141218

AP - CN20142804429U 20141218

DT - I

PA - ZHANG LIQIN

TI - Novel **floor drain** service life detection device

AB - The utility model discloses a novel **floor drain** service life detection device including, from the bottom to the **top**, a base also serving as a water storage chamber, a filtering device, a **floor drain** chamber, a circulating water outlet device, and a pipeline **assembly** connecting the base and the circulating water outlet device. A booster pump is arranged on a water **pipe** connecting the base and the circulating water outlet device and is used for water circulation. The novel **floor drain** service life detection device is compact in structure from the **top** to the bottom, and small in size; the functional units are orderly cooperated, and by means of the water circulation of the booster pump, the water inlet **testing of floor** drains can be continuously carried out, and the **floor** drains in different types and structures can be tested.

[SS 41] Drain and top and pressure and pipe

Results in EPODOC 1.907

[SS 42] ../IC E03F5/04

Unknown command or preparation. [More info](#) ERROR(-104000)

[SS 42] /IC E03F5/04

Results in EPODOC 16.285

[SS 43] 41 AND 42

Results in EPODOC 10

[SS 44] ..LI



1/10 © EPODOC / EPO

PN - [CN205444412U](#) U 20160810
PR - CN20162298370U 20160412
AP - CN20162298370U 20160412
DT - I
PA - HUBEI KINGBULL PIPE IND CO LTD
TI - Double -deck water seal floor **drain**
AB - The utility model discloses a double -deck water seal floor **drain**, double -deck water seal floor **drain** still includes first order water seal and second level water seal board, the drainage board holds body upper portion has a floor **drain** drainage integrated circuit board groove, and the lower part is the hollow circular cylinder form, and the drainage board holds physically and to be equipped with the spacing collar in the lower part, the floor **drain** heart is tubular structure at the bottom of the cylinder area, its **top** diameter increase, and be equipped with the round around the **top** and cross the water hole, first order water seal is hollow structure, and the **top** diameter is the same with floor **drain** heart **top** diameter, and its bottom diameter is lighter than core diameter in the floor **drain**, and floor **drain** main body end cover lower part is fixed with second water seal board, floor **drain** main body is equipped with row water **pipe** connector. Through setting up the floor **drain** main body of lower floor machine water -stop sheet to increase by one water seal on floor **drain** main body, it is sealed to prevent that the great negative **pressure** of the too big production of trunk line rivers from destroying the upper strata, or destroys lower floor's water seal, because the floor **drain** main body volume is big, the production negative **pressure** of trunk line is difficult to destroy its sealing performance.

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PN - [KR20150133455](#) A 20151130
PR - KR20140060177 20140520
AP - KR20140060177 20140520
DT - I
PA - HAENG SAN CO LTD [KR]
TI - POLYETHYLENE SIDE GUTTER
AB - The present invention relates to a polyethylene (PE) porous side gutter water **pipe** to

discharge water flowing out of a surface layer of a paved road and characterized by including a body with an internal receiving space, having open front, rear, and **top** surfaces, cover supporting protrusion units on lateral ends, and a central supporting unit vertically protruding from the bottom surface to a predetermined length; a cover seated on the cover supporting protrusion units and the central supporting unit to cover the **top** of the body and including a **drain** groove on the lateral end to guide water flowing out of the surface layer of the paved road to the receiving space of the body; reinforcing ribs installed between the outer surfaces of the body and the bottom surfaces of the cover supporting protrusion units; and flowing preventing units formed in an area where the body comes in contact with the cover to keep the cover to be arranged on the body. The PE porous side gutter water **pipe** is installed on not only the edges of the paved road but also on a high-**pressure** block paved road (ILP road) and a vehicle-pedestrian road, thereby allowing smooth discharge of water.

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- PN - [CN204112469U](#) U 20150121
- PR - CN20142527193U 20140915
- AP - CN20142527193U 20140915
- DT - I
- PA - CHENJUFANG
- TI - Self-adaptive deodorizing floor **drain**
- AB - The utility model discloses a self-adaptive deodorizing floor **drain**. The self-adaptive deodorizing floor **drain** comprises a floor **drain** frame, a filtering cover, a strainer, a **pressure** deodorizing water seal and a **drain** bucket. The **drain** bucket is arranged on the floor **drain** frame, the **pressure** deodorizing water seal is arranged in the **drain** bucket, the strainer and the filtering cover is sequentially arranged at the **top** end of the **pressure** deodorizing water seal from bottom to **top**, the **drain** bucket is of a cylindrical structure with a sealed bottom, a plurality of water outlets are arranged on the upper portion of the **drain** bucket, and the undermost ends of the water outlets are positioned above the lower end face of a shell. When water enters the floor **drain**, the **pressure** deodorizing water seal is in an open state, and the water enters a **drain pipe**; when no water enters the floor **drain**, the **pressure** deodorizing water seal is in a closed state. The deodorizing floor **drain** is provided with two layers of sealing devices, the first layer of sealing device refers to the **pressure** deodorizing water seal which seals the shell, and the second layer of sealing device refers to a water seal formed by the **drain** bucket, so that the floor **drain** has good sealing effect; meanwhile, the floor **drain** has good **drain** effect and is convenient to use.

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- PN - [CN104213629](#) A 20141217
- PR - CN20141467162 20140915
- AP - CN20141467162 20140915
- DT - I
- CT - || STSE (A)
[CN203654436U](#) U 20140618 [A] (QINGDAO SIFANG KAWASAKI ROLLING STOCK TECHNOLOGY CO LTD)
[A] 1-4
全文

[CN2719942Y](#) Y 20050824 [A] (CAIDIE SCIENCE TECHNOLOGY DEV [CN])

[A] 1-4

全文

[CN2403830Y](#) Y 20001101 [Y] (ZHOU BAIXING [CN])

[Y] 1-4

说明书第1页及附图1

[WO2010067909](#) A1 20100617 [A] (KIM JONG SUN [KR])

[A] 1-4

全文

[CN200955176Y](#) Y 20071003 [Y] (JIANG PENG [CN])

[Y] 1-4

说明书第2页倒数第1段,第3页倒数第1段,第4页倒数第2段及图6

[CN102767231](#) A 20121107 [Y] (MAIN PLAN NINGBO BATHROOM COLLECTIONS CO LTD)

[Y] 2-4

说明书实施例1及附图1-2

[CN200955175Y](#) Y 20071003 [A] (LI HUIMOU [CN])

[A] 1-4

全文

[CN204112469U](#) U 20150121 [R] (CHEN JUFANG)

[R] 1-4

权利要求1-4

PA - CHENJUFANG

TI - Self-adaptive odor-resistant floor **drain**

AB - The invention discloses a self-adaptive odor-resistant floor **drain** which comprises a floor **drain** frame, a filter cover, a filter screen, a **pressure** odor-resistant water seal part and a drainage bucket. The drainage bucket is arranged on the floor **drain** frame; the **pressure** odor-resistant water seal part is arranged in the drainage bucket; the filter screen and the filter cover are sequentially arranged at the **top** end of the **pressure** odor-resistant water seal part from bottom to **top**; the drainage bucket is of a barrel-shaped structure of which the bottom is sealed; the upper part of the drainage bucket is provided with a plurality of water outlets; the lowermost ends of the water outlets are positioned at the lower end face of a shell; when water enters the floor **drain**, the **pressure** odor-resistant water seal part is in an open state and water enters a sewer **pipe**; when no water enters the floor **drain**, the **pressure** odor-resistant water seal part is in a closed state. The odor-resistant floor **drain** disclosed by the invention is provided with two layers of sealing devices; the first layer of sealing device is the **pressure** odor-resistant water seal part and enables the shell to be sealed; the second layer of sealing device is a water seal formed by the drainage bucket; the self-adaptive odor-resistant floor **drain** has a good sealing effect; moreover, the floor **drain** has a good drainage effect and is convenient to use.

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PN - [CN104060656](#) A 20140924

PNFP - CN104060656B B 20160210

PR - CN20141306873 20140630

AP - CN20141306873 20140630

DT - I

CT - || STSE (A)

[CN204080978U](#) U 20150107 [R] (BEIJING KANGZHIWEI SCIENCE & TECHNOLOGY CO LTD);

[JP2011032797](#) A 20110217 [A] (TOTO LTD);
[CN103850306](#) A 20140611 [A] (YANG ZHIPING);
[CN2525133Y](#) Y 20021211 [A] (ZHAO XIN [CN]);
[CN86200034U](#) U 19870603 [A]

CUI - [E03F5/04](#) ; [E03C1/28](#)
 CUA - [E03F2005/0416](#)
 PA - (A)
 BEIJING KANGZHIWEI SCIENCE & TECHNOLOGY CO LTD
 TI - (A)
 Multi-layer water seal device and method
 AB - (A)
 The invention discloses a multi-layer water seal device. The multi-layer water seal device comprises two or more water seals which are sequentially arranged from **top** to bottom, wherein the upper water seal is of a floating bell jar type structure comprising a water seal box and a floating jar bell arranged in the water seal box; the lower water seal is arranged in a **drain pipe** below the floating bell jar; one side of the water seal box extends or is connected with a communication cavity chamber deviated from the **drain pipe**, the floating bell jar also correspondingly extends or is connected with the floating component, and the floating component is deviated from the **drain pipe** and floats in the communication cavity room. When sewage in the water seal box rapidly flows away through the **drain pipe**, floating force on the floating component from the communication cavity chamber is greater than that on the floating bell jar from the water seal box, and the larger the distance between the water seal box and the **drain pipe** is, the larger floating force larger. Thus, the floating bell jar is inclined towards the outer side of the water seal box because of unbalance of the floating force, it is avoided that the floating bell jar is adsorbed to the bottom wall of the water seal box under the action of the negative **pressure** of the **drain pipe**, and work stability of the water seal device is improved. The invention further discloses a multi-layer water seal method.

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PN - [CN203821546U](#) U 20140910
 PR - CN20142132764U 20140321
 AP - CN20142132764U 20140321
 DT - I
 PA - GUANGZHOU PB LANDSCAPE DESIGN & CONSTRUCTION CO LTD
 TI - Ecological catch basin structure
 AB - The utility model discloses an ecological catch basin structure. The ecological catch basin structure comprises a well lid plate, a concrete structure, a rainwater well body, a concrete foundation and a rammed plain soil foundation which are sequentially arranged in a well-like structure from **top** to bottom, wherein the well-like structure is excavated at natural soil. A horizontal channel communicated with the well-like structure is also excavated in the natural soil; a PVC (polyvinyl chloride) **drain pipe** is arranged in the horizontal channel; through holes in the side surface of the body of the catch basin are communicated with the PVC **drain pipe**; the body of the catch basin is formed by longitudinally building porous bricks; the porous bricks have **drain** holes which are horizontally arrayed. According to the ecological catch basin structure, the water permeability of the catch basin is enhanced, a green land can play the water storage and emission reduction functions and the flood peak **pressure** of drainage in rainfall is reduced.

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- PN - [CN102561501](#) A 20120711
- PR - CN20101579075 20101209
- AP - CN20101579075 20101209
- DT - I
- CT - || STSE (A)
[JPH0344119](#) A 19910226 [A] (MITSUBISHI ELECTRIC CORP)
[A] 1-5
全文
[CN201883521U](#) U 20110629 [R] (CHINACO INTERNAT TECHNOLOGY DEV CO LTD)
[R] 1-5
权利要求1-5
[CN201165703Y](#) Y 20081217 [A] (SICHUAN TIANXIN INDUSTRY GROUP [CN])
[A] 1-5
全文
- CTNP - || STSE (A)
[Y] "建筑给水排水工程", 马金, <<建筑给水排水工程>>, PAGE 13
[Y] 1-5
13
[Y] "城市地下管线施工新技术与质量检验评定标准实施手册", 赖新元, <<城市地下
管线施工新技术与质量检验评定标准实施手册 (中卷)>>, PAGE 737
[Y] 1-5
737
- PA - CHINA ALUMINUM INT TECH DEV CO
- TI - **Pressure** pipeline leakage detection **pipe** ditch for collapsible loess regions
- AB - The invention discloses a **pressure** pipeline leakage detection **pipe** ditch for collapsible loess regions. A plant **pressure** pipeline is disposed in a leakage detection **pipe** ditch (1), the **top** of the leakage detection **pipe** ditch (1) is provided with vent holes (4) and leakage detection wells (3), the bottom of the leakage detection **pipe** ditch (1) is provided with water collection wells (2), and a **drain pipe** (7) is disposed in each water collection well (2) and connected with a rainwater inspection well (5). Leaking water from the **pressure** pipeline is finally drained to a sewage treatment station for treatment or drained out of a plant through plant rainwater **drain** pipelines (6). By using the **pressure** pipeline leakage detection **pipe** ditch, the problem of water leakage of the **pressure** pipelines in the collapsible loess region is solved, the deficiencies of standard atlas of leakage detection **pipe** ditches in the collapsible loess regions can be complemented, and the **pressure** pipeline leakage detection **pipe** ditch has the advantages of safety, practicality and the like.

8/10 © EPODOC / EPO

- PN - [KR20120036163](#) A 20120417
- PNFP - KR101152571B B1 20120601
- PR - KR20100097885 20101007
- AP - KR20100097885 20101007
- DT - I
- CNOI - (A)
[E03F5/041](#) ; [E03F5/08](#)
- CNOA - (A)

[E03F2201/00](#)

- PA - (A)
SCENTEC [KR]
- TI - (A B1)
DEORDORIZING SYSTEM FOR **DRAIN PIPE**
- AB - (A)
PURPOSE: A deodorizing system for a **drain pipe** is provided to effectively remove offensive odors from a **drain pipe** even if the amount of sewage or rainwater is sharply increased. CONSTITUTION: A deodorizing system(100) for a **drain pipe** comprises deodorizing units(140) and air current cutoff assemblies. The deodorizing units are installed on the **top** of a **drain pipe**(10) at uniform intervals and collect and remove offensive odors. The air current cutoff assemblies are installed on the inner **top** end of the **drain pipe** at uniform intervals and form negative **pressure** inside the **drain pipe**.

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- PN - [CN201952884U](#) U 20110831
- PR - CN20102679671U 20101225
- AP - CN20102679671U 20101225
- DT - I
- PA - GUOQIANG LIN
- TI - Multifunctional floor **drain** capable of being overhauled in same floor
- AB - The utility model provides a multifunctional floor **drain** capable of being overhauled in the same floor, and relates to a floor **drain** for buildings. The floor **drain** is composed of an outer jacket, an inner jacket, a water seal device and a floor **drain** cover plate; the outer jacket and the inner jacket respectively adopt a **pipe** fitting with one closed end; the outer jacket and the inner jacket are in clearance fit; the water seal device is a hollow column body; the upper part external wall of the water seal device is in clearance fit with the internal wall of the inner jacket; the length of the water seal device is less than the length of the inner jacket; the lower part of the water seal device is suspended in the inner jacket; the water seal device divides the inner jacket into two chambers of which bottom parts are communicated; a drainage outlet of the inner jacket is located below the connecting part of the water seal device and the inner jacket, and is higher than the horizontal plane of the tail end of the water seal device; a drainage outlet of the outer jacket corresponding to the drainage outlet of the inner jacket is arranged on the outer jacket; the floor **drain** cover plate is located at the **top** end of the inner jacket or the outer jacket. The multifunctional floor **drain** is easy to maintain, the height for mounting the horizontal support **pipe** of the floor **pipe** from the floor surface is reduced, the blocking rate of the floor **drain** is reduced, and the ability of the floor **drain** on resisting air **pressure** fluctuation in the drainage upright **pipe** is also improved.

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- PN - [CN201883521U](#) U 20110629
- PR - CN20102648153U 20101209
- AP - CN20102648153U 20101209
- DT - I
- PA - CHINACO INTERNAT TECHNOLOGY DEV CO LTD
- TI - **Pressure** pipeline leakage detection **pipe** ditch for collapsed loess areas

AB

- The utility model discloses a **pressure** pipeline leakage detection **pipe** ditch for collapsed loess areas. A plant **pressure** pipeline is arranged in a leakage detection **pipe** ditch (1), vent holes (4) and leakage detection wells (3) are arranged at the **top** of the leakage detection **pipe** ditch (1), water collection wells (2) are arranged at the bottom of the leakage detection **pipe** ditch (1), **drain** pipes (7) are arranged in the water collection wells (2) and connected with a rainwater inspection well (5), and leaked water of the **pressure** pipeline is finally drained through a plant rainwater **drain** pipeline (6) out of a plant or to a sewage treatment station for treatment. The **pressure** pipeline leakage detection **pipe** ditch solves the collapse of collapsed loess areas caused by water leakage of the **pressure** pipeline, fills the insufficiency of the conventional standard atlas of leakage detection **pipe** ditches in collapsed loess areas, and has the advantages of safety, reliability, etc.

[SS 44]