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(54) **A shower tray**

Eine Duschwanne

Bac de douche

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(73) Proprietor: **Moldcom Composites, S.L.  
46190 Ribarroja del Turia Valencia (ES)**

(72) Inventor: **MURRIA AREVALO, Ricardo  
E-46190 Ribarroja del Turia (ES)**

(74) Representative: **Sanz-Bermell Martinez, Alejandro  
Sanz Bermell Internacional  
Jativa, 4  
46002 Valencia (ES)**

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## Description

[0001] This invention refers to a shower tray made up of a core of filling material and a covering body made of a soft material; both the core and the covering body can be cut to allow them to fit any geometry; its cost is moderate as compared with other shower trays made in a single body, and it has a pleasant feel, as said covering body is deformable.

## State of the art

[0002] Different kinds of shower trays are available. Ceramic-based shower trays have traditionally been used. These trays nevertheless involve several disadvantages:

- Their hardness: this means that the user feels uncomfortable when using them, which is why this is an undesirable quality;
- The surface: the surface of ceramic shower trays is absolutely smooth, which means that it is easy to slip on them; this can be overcome by adding adhesive elements to their surface, but the easy of accumulating residues in the joints and the permanent damp atmosphere to which these are subject makes these coverings a rather unsatisfactory solution.
- Stiffness; ceramic shower trays cannot be split up and thus cannot be adapted to any geometry. Instead any modifications necessary for the tray to be adapted have to be made in the cubicle;
- Fragility; ceramic shower trays are delicate in the event of impacts, which can make them break.

[0003] Another kind of shower trays are those of polymeric synthetic materials in which the tray is made in a single mould, in a single material. These trays are soft and flexible, and although they can be adapted to any required shape by cutting, they have the disadvantage that, through being soft, deformations in the surface are caused when treading close to the drain zone, which give rise to water leaks. These are also hard to fit and they are not provided with the drainage slopes required for proper channelling of the water.

[0004] Foamed polymer trays are also known of. Though not having the disadvantage described above of water leaks through deformation of the drainage zone, these do not offer the comfort of being soft to tread on either, as is desirable, and they cannot be adjusted by cutting on site, which makes their application very limited. As in the previous case, the drainage valve has to be held to a flexible part, and a reinforcement has to be made in the area where this is fitted in order to minimise the aforementioned adverse effects. A shower tray according to the preamble of claim 1 is known from WO 2011/135318 A1.

## Description of the invention

[0005] The invention now being proposed covers a tray for a shower comprising the features of claim 1 which solves the above disadvantages so as to provide a shower tray with a soft surface which comprises drainage slopes and can be cut to size on site or anywhere else with no detriment to the required sealing conditions.

[0006] This comprises a rigid inner core, made from a polymeric material. According to a specific embodiment, the material is a resin to which mineral content is added, so as to improve its mechanical properties and reduce the cost of production. The upper surface of this core is made in such a way that this comprises a hole for the drain and the corresponding slopes tilting towards this hole.

[0007] A soft covering, made of a polyurethane rubber, is incorporated on this core. The covering is closely linked to the upper and side surfaces of the rigid core, keeping the slopes towards the drain hole, also made in the covering.

[0008] The height of the rigid core can be variable, depending on the installation conditions (fitted flush or superimposed, etc.) and decorative interest, and will be placed at from 1 cm to 20 cm.

[0009] The covering will be from mm to 10 mm thick, depending on the comfort conditions required, and an optimum thickness will normally be between 2 mm and 4 mm.

## Short description of the drawings

[0010] In order to illustrate the following explanation, we adjoin one sheet of drawings to this descriptive report in which two figures represent the essence of this invention, and in which:

- Figure 1 shows a cross-section of the shower tray according to the invention, in which the rigid core and the covering can be seen; and
- Figure 2 shows a perspective view of an assembly example in which a corner of the tray has been cut away to get by a pillar, and in which the lateral edges can be seen.

## Detailed description of a form of embodiment of the invention

[0011] As has already been described, the proposed invention consists of a shower tray (1) which comprises a rigid core (2) which can be in any shape, although this will normally be square or rectangular. According to the invention, this rigid core (2) is made up of a resin matrix, to which mineral contents are added. This rigid core (2) has a drain hole (7) made in it, to which a conventional trap or drain can be fitted.

[0012] This rigid core (2) is surrounded by a covering (3). This covering (3) is also a lateral covering (6). In the

event of the shower tray (1) of the invention being for placing on top of the floor (fig. 2), this covering gives the tray a satisfactory visual appearance. The hole (7) is intended to have a cover (4) of a material similar to that of the covering (3), although a conventional drain can be fitted on this hole (7). The material of the covering (3) is as a polyurethane rubber. The covering is from 1mm to 10mm thick, though this will preferably be in the range of 2mm to 4mm.

**[0013]** When this has to be installed in a location where there are irregularities, such as for example a pillar, a cut (5) has to be made in the shower tray (1) to adapt to the shape of this irregularity. The cut part will be integrated in the tiling or facing of the wall, for which reason this does not entail any aesthetic disadvantage. The covering materials (3) such as those of the rigid core (2) are water repellent, for which reason they are not affected by any possible damp through improper fitting.

**[0014]** The dimensions of the tray are variable as regards surface area and thickness, depending on the decorative and functional requirements in each case.

## Claims

1. A shower tray, basically being made up of two parts:

- A rigid core (2) made of a polymeric material made up of a resin core with mineral content., and
- An outer covering surrounding this rigid core which is securely joined to the rigid core,

the outer covering being a soft covering (3), **characterised in that** the material of which this outer covering (3) is made being a polyurethane rubber; Where the rigid core has a thickness of 1 to 20 cm, and

Where the covering (3) has a thickness of 1 mm to 10mm; and

Where shower tray comprising said materials used for the outer covering (3) and the rigid core (2) is configured to be cut to size on site with no detriment to the required sealing condition.

2. A shower tray, according to claim 1, **characterised in that** the rigid core (2) has a drain hole (7) made in it, to which a conventional trap or drain can be fitted.

3. A shower tray, according to any of claims 1 to 2, **characterised in that** the outer covering (3) is also a lateral covering (6).

4. A shower tray, according to claim 1 or claim 3, **characterised in that** the hole (7) has a cover (4) made of a material similar to the one of the covering (3),

5. A shower tray, according any of claims 1 to 4, **characterised in that** the covering (3) is from 2mm to 4mm thick.

6. A shower tray, according to any of claims 1 to 5, **characterised in that** the materials of the outer covering (3) and the rigid core (2) are water-repellent.

## Patentansprüche

1. Duschwanne, welche im Wesentlichen aus zwei Teilen besteht:

- einem starren Kern (2), welcher aus einem Polymermaterial hergestellt ist, dass aus einem Harzkern mit einem Mineralgehalt besteht, und
- einer diesen Kern umgebenden äußeren Abdeckung, welche mit dem starren Kern fest verbunden ist,

wobei die äußere Abdeckung eine weiche Abdeckung (3) ist, **dadurch gekennzeichnet, dass** das Material, aus dem diese äußere Abdeckung (3) besteht, ein Polyurethankautschuk ist;

wobei der starre Kern eine Dicke von 1 bis 20 cm aufweist, und wobei die Abdeckung (3) eine Dicke von 1 mm bis 10 mm aufweist; und

wobei die Duschwanne, welche die Materialien umfasst, die für die äußere Abdeckung (3) und den starren Kern (2) verwendet werden, gestaltet ist, um vor Ort ohne Beeinträchtigung der erforderlichen Abdichtungsbedingungen zugeschnitten zu werden.

2. Duschwanne nach Anspruch 1, **dadurch gekennzeichnet, dass** der starre Kern (2) ein in diesem hergestellten Abflussloch (7) aufweist, an welches ein herkömmlicher Geruchverschluss oder Abfluss angebracht werden kann.

3. Duschwanne nach einem der Ansprüche 1 bis 2, **dadurch gekennzeichnet, dass** die äußere Abdeckung (3) auch eine seitliche Abdeckung (6) ist.

4. Duschwanne nach Anspruch 1 oder Anspruch 3, **dadurch gekennzeichnet, dass** das Loch (7) eine Abdeckung (4) aufweist, welche aus einem Material hergestellt ist, das dem der Abdeckung (3) ähnlich ist.

5. Duschwanne nach einem der Ansprüche 1 bis 4, **dadurch gekennzeichnet, dass** die Abdeckung (3) 2 mm bis 4 mm dick ist.

6. Duschwanne nach einem der Ansprüche 1 bis 5, **dadurch gekennzeichnet, dass** die Materialien der äußeren Abdeckung (3) und des starren Kerns (2) wasserabweisend sind.

## Revendications

1. Receveur de douche, étant essentiellement constitué de deux parties :
 

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  - Un coeur rigide (2) fait en un matériau polymère constitué d'un coeur en résine avec une teneur en minéraux, et
  - Un revêtement externe entourant ce coeur rigide qui est fixement relié au coeur rigide, 10

le revêtement externe étant un revêtement souple (3), **caractérisé en ce que** le matériau dont ce revêtement externe (3) est fait est un caoutchouc polyuréthane ; 15

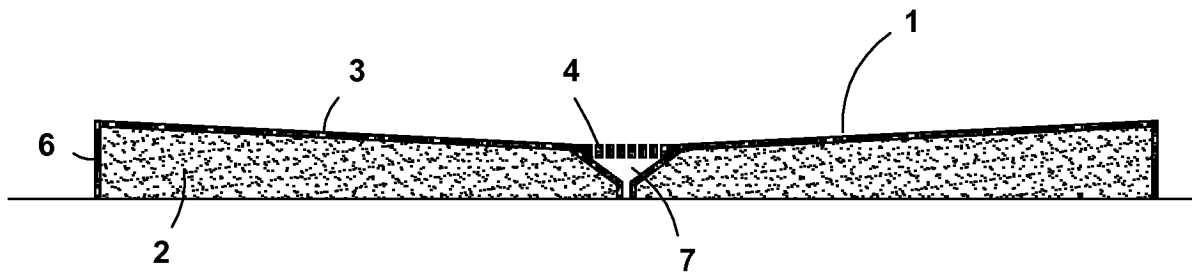
Où le coeur rigide a une épaisseur de 1 à 20 cm, et

Où le revêtement (3) a une épaisseur de 1 mm à 10 mm ; et

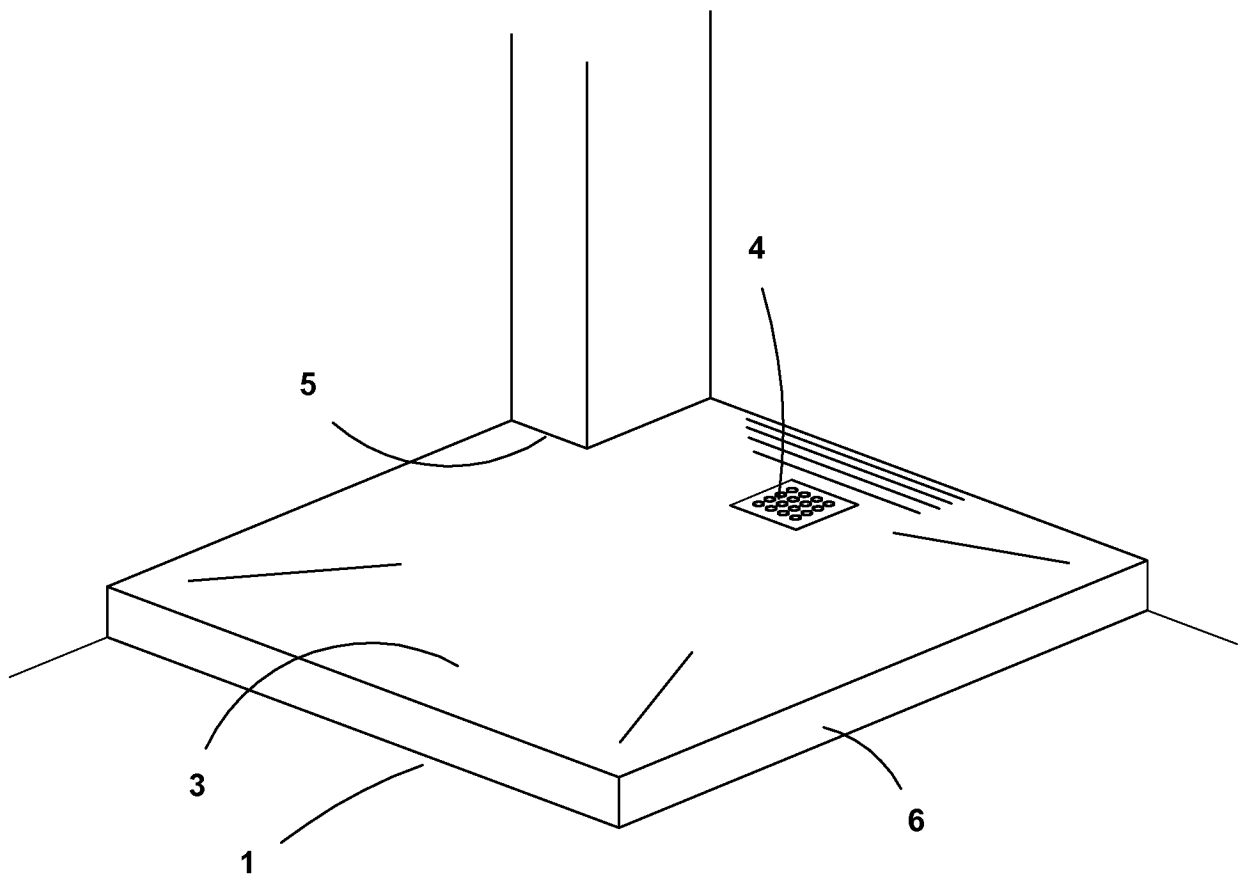
Où le receveur de douche comprend lesdits matériaux utilisés pour le revêtement externe (3) et le coeur rigide (2) est configuré pour être découpé à dimension sur le site sans préjudice pour la condition de scellement requise. 20
2. Receveur de douche, selon la revendication 1, **caractérisé en ce que** le coeur rigide (2) a un orifice de drainage (7) fait dans celui-ci, auquel une trappe ou un drain conventionnels peuvent être introduits. 25
3. Receveur de douche, selon l'une quelconque des revendications 1 à 2, **caractérisé en ce que** le revêtement externe (3) est également un revêtement latéral (6). 30
4. Receveur de douche, selon la revendication 1 ou la revendication 3, **caractérisé en ce que** l'orifice (7) a une couverture (4) faite en un matériau similaire à celui du revêtement (3), 35
5. Receveur de douche, selon l'une quelconque des revendications 1 à 4, **caractérisé en ce que** le revêtement (3) a une épaisseur de 2 mm à 4 mm. 40
6. Receveur de douche, selon l'une quelconque des revendications 1 à 5, **caractérisé en ce que** les matériaux du revêtement externe (3) et du coeur rigide (2) sont imperméables. 45

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**Fig. 1**



**Fig. 2**

**REFERENCES CITED IN THE DESCRIPTION**

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**Patent documents cited in the description**

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