

Description

The invention relates to a drum with a drum closure provided in a drum wall, comprising an insert and a closure cap which can be placed in the insert, which insert is situated in a collar on the drum wall pointing towards the outside of the drum, and has a first flange which rests against the inside of the drum wall, and a second flange which is flanged radially outwards over the collar, a sealing ring which is wedged between the first flange and the inside of the drum wall to form a first seal, and an additional seal formed either by a sealing ring integral with the first sealing ring or by a separate sealing ring, which additional seal is provided between the collar and the insert lying opposite the collar.

Such a drum having a drum closure with a second, additional sealing ring formed integrally with the first sealing ring is known from US-A-3946894. A drum having a drum closure with a second sealing ring which is separate from the first sealing ring is known from GB-A-943148.

The sealing action of the sealing rings is maintained as long as they are held firmly clamped between the insert and the collar. However, this clamping action can get lost if the drum falls, topside down, on a hard surface. The insert and collar, which project with respect to the drum wall, are pressed inwards, which results in an increased spacing between the first flange and the drum wall. Thereby, the sealing action of the sealing rings is impaired.

The objective of the invention is to provide a drum with a drum closure which offers a better sealing even in case the insert and collar are pressed inwardly. This objective is achieved in that in the area delimited by the outer peripheral edge of the first flange on the one hand, and of the top edge of the collar on the other hand, the insert and the container are in contact only with the sealing rings, in such a way that the sealing action is maintained even if the insert is pressed inward relative to the collar.

Two embodiments of the invention will be explained in greater detail with reference to the figures.

Figures 1, 2 and 3 show a first embodiment of the drum with drum closure.

Figures 4, 5 and 6 show a second embodiment.

In the embodiment shown in Figures 1, 2 and 3 the drum wall is indicated by 1. An outward pointing collar 2 is formed in this drum wall and connects by means of the recessed wall part 3 to the remainder of drum wall 1. In the situation shown in Figure 1 the insert, indicated in its entirety by 4, is inserted into collar 2, while its second flange 5

projects outwards relative to collar 2. Insert 4 also has a first flange 6 which lies opposite the recessed wall part 3. A sealing ring 7 is provided between said wall part 3 and flange 6. The insert also has an internal screw thread, into which another closing cap, not shown, can be screwed.

For fixing the insert 4 to drum wall 1, flange 6 and wall part 3 are pressed towards each other, in the course of which sealing ring 7 is compressed. In that state the flange 5 is flanged over collar 2, with the result that the sealing ring can be held under pre-tension.

According to the invention, an additional sealing ring 9 is fitted directly beside the sealing ring 7. In order to ensure that the additional sealing ring 9 goes into the correct position between the insert 4 and the collar 2 when the insert 4 is connected to the drum wall 1, the collar 2 is widened a little at the underside.

During the compression of insert 4 and drum wall 1 the additional sealing ring 9 can consequently go into the position shown in Figure 2. In this case it is radially compressed, and is consequently largely unaffected by the sliding inwards of the insert 4 as the result of a fall: see Figure 3.

In the completed state shown in Figure 2, it can be seen that there is a double seal between the insert 4 and drum wall 1, namely at the position of sealing ring 7 and at the position of the additional sealing ring 9.

However, when there are great deformations, for example those which occur as the result of the drum falling with the closure facing down, the situation shown in Figure 3 occurs. The insert 4 is pressed greatly inwards, with the result that the flange 6 has come to lie at a greater distance from wall part 3. A great part of the pre-tension in sealing ring 7 is consequently lost, which could give rise to leakages.

As also shown in Figure 3, the pre-tension of the additional sealing ring 9 has not, however, decreased, so that the correct seal has been retained at that point.

The variant shown in Figures 4 - 6 has a sealing ring 12 which is in one piece, and which essentially comprises the parts 13 and 14 which correspond to sealing rings 7 and 9 according to Figures 1 - 3. In this case also the collar 11 is widened a little at the underside. When insert 4 and end wall 1 are fixed, part 14 of sealing ring is now compressed radially, and is therefore unaffected by shifts. When deformations occur the part 13 can expand, but this is not at the expense of the overall seal.

Claims

1. Drum with a drum closure provided in a drum wall, comprising an insert (4) and a closure cap which can be placed in the insert (4), which insert (4) is situated in a collar (2, 11) on the drum wall (3) pointing towards the outside of the drum (1), and has a first flange (6) which rests against the inside of the drum wall (3), and a second flange (5) which is flanged radially outwards over the collar (2, 11), a sealing ring (7, 12) which is wedged between the first flange (6) and the inside of the drum wall (3) to form a first seal, and an additional seal (9, 14) formed either by a sealing ring (14) integral with the first sealing ring (13) or by a separate sealing ring (9), which additional seal (9, 14) is provided between the collar (2, 11) and the insert (4) lying opposite the collar, characterized in that in the area delimited by the outer peripheral edge of the first flange (6) on the one hand, and of the top edge of the collar (2, 11) on the other hand, the insert (4) and the container (1) are in contact only with the sealing rings (7, 9, 12), in such a way that the sealing action is maintained even if the insert (4) is pressed inward relative to the collar (2, 11).

Patentansprüche

1. Behälter mit einem in einer Behälterwand angeordneten Behälterverschluß, umfassend einen Einsatz (4) und eine Verschlusskappe, die in den Einsatz (4) eingesetzt werden kann, wobei der Einsatz (4) in einem Kragen (2, 11) an der Behälterwand (3) sitzt, der zur Außenseite des Behälters (1) hin weist, und einen ersten Flansch (6) hat, welcher an der Innenseite der Behälterwand (3) anliegt, sowie einen zweiten Flansch (5), welcher radial nach außen über den Kragen (2, 11) gebördelt ist, ferner einen Dichtring (7, 12), welcher zwischen dem ersten Flansch (6) und der Innenseite der Behälterwand (3) eingekeilt ist und eine erste Dichtung bildet, sowie eine zusätzliche Dichtung (9, 14), die entweder durch einen mit dem ersten Dichtring (13) einstückigen Dichtring (14) oder durch einen getrennten Dichtring (9) gebildet ist, wobei die zusätzliche Dichtung (9, 14) zwischen dem Kragen (2, 11) und dem dem Kragen gegenüberliegenden Einsatz (4) vorgesehen ist, dadurch gekennzeichnet, daß in dem durch die äußere periphere Kante des ersten Flansches (6) einerseits und der oberen Kante des Kragens (2, 11) andererseits begrenzten Bereich der Einsatz (4) und der Behälter (1) nur mit den Dichtringen (7, 9, 12) in

Kontakt sind derart, daß die Dichtwirkung auch aufrechterhalten wird, wenn der Einsatz (4) relativ zum Kragen (2, 11) nach innen gedrückt wird.

Revendications

1. Fût avec une fermeture de fût réalisée dans une paroi de fût, comprenant un insert (4) et un bouchon de fermeture qui peut être placé dans l'insert (4), lequel insert (4) est disposé dans une collerette (2,11) sur la paroi de fût (3), orientée vers l'extérieur du fût (1), et possède une première portée (6) qui s'appuie contre l'intérieur de la paroi de fût (3), et une seconde portée (5) qui est bordée radialement vers l'extérieur par-dessus la collerette (2,11), une bague d'étanchéité (7,12) qui est coincée entre la première portée (6) et l'intérieur de la paroi de fût (3) pour former un premier joint, et un joint additionnel (9,14) formé soit par une bague d'étanchéité (14) d'un seul tenant avec la première bague d'étanchéité (13), soit par une bague d'étanchéité séparée (9), lequel joint additionnel (9,14) est réalisé entre la collerette (2,11) et l'insert (4) situé en vis à vis de la collerette, caractérisé en ce que dans la zone délimitée par le bord périphérique extérieur de la première portée (6) d'une part, et du bord supérieur de la collerette (2,11) d'autre part, l'insert (4) et le conteneur (1) sont en contact seulement avec les bagues d'étanchéité (7, 9, 12) de telle sorte que l'effet d'étanchéité est maintenu même si l'insert (4) est pressé vers l'intérieur par rapport à la collerette (2,11).

