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(54) **AN ELEMENT FOR THE PROVISION OF A SEALING TRANSITION IN CONNECTION WITH BUILDING COMPONENTS**

ELEMENT ZUR BEREITSTELLUNG EINES DICHTUNGSÜBERGANGS IN VERBINDUNG MIT GEBÄUDETEILEN

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Description

[0001] The present invention relates in a first aspect to a method of providing a sealing transition between two building components according to claim 1.

[0002] The present invention relates in a second aspect to a sealing element, for use in the method of claim 1.

[0003] When different weather screening building components are to be connected with each other, it is important that tightness against weather conditions is secured, also at the junction points between the components.

[0004] When installing e.g. roof-penetrating structures such as roof windows in inclined roof structures, it is thus important to provide as tight a transition as possible between the actual window and the surrounding roof covering.

[0005] This is normally obtained by connecting a flashing to the frame of the window where, in case of a rectangular window with the frame side portions extending in the direction of inclination of the roof at each side portion, such a flashing comprises a side flashing made as a substantially L-shaped sheet member with a first leg extending upwards along the frame side portion concerned and a second leg protruding perpendicularly hereon in the plane of the roof surface.

[0006] With a view to providing a sealing transition between the second leg of the side flashing and the surrounding roof covering, an element of the kind mentioned in the introduction is usually used, where, in a mounted position, said element is connected to the flashing, e.g. by gluing the bottom surface of the element to the protruding leg of the side flashing. After connecting the flashing to the frame of the window, the roof covering is put on top of the actual flashing and thus over the sealing elements of the side flashing. In case of profiled roof covering material such as roof tiles with varying cross-sectional shapes, it is necessary that the sealing element has a relatively large extent in the height direction, so that a sealing transition is also established even if the element is located under the highest part of the profiling. On the other hand, this implies that when placing the element differently relative to the profiling, an unwanted deformation of the element will occur, which will possibly entail that grooves are created where water and other types of precipitation can penetrate and seep through to the roof structure located under the roof covering. In order to avoid this, the element is cut to size in the height direction dependent on the location relative to the profiling. As this cutting is bound to take place in the actual fitting position, the working conditions can possibly entail that this is not always done accurately, particularly in case of long windows with corresponding long sealing elements.

[0007] On this background, it is the object of the invention to provide an element of the kind described in the introduction, where said element is universally applicable and makes it possible to obtain improved tightness and at the same time to facilitate the work routine in connection with the adaptation to the shape of the individual roof covering.

tion with the adaptation to the shape of the individual roof covering.

[0008] This object is obtained with such an element which is characterized by said sealing element being provided with at least one slit emanating from a wall surface of the sealing element and extending substantially parallel to said first portion and in the longitudinal direction of said sealing element, the at least one slit being situated at a distance from said first portion and extending approximately half-way through the cross section of the sealing element.

[0009] In this way, the element can in a simple manner be adapted to the profiling of e.g. roof tiles by cutting or tearing superfluous parts away along such a weakening portion and thereby reducing the height of the element.

[0010] Even though the element may be used universally in weather screening building components, a preferred embodiment is characterized in that the element is designed to provide a sealing transition between a flashing surrounding a roof-penetrating structure, and a surrounding roof covering.

[0011] Each weakening portion comprises a slit emanating from a wall surface of the element. If the slit or the slits are provided on an external wall surface, the element can be bent, and thereby the cutoff of the top part of the element is made easier.

[0012] The slits extend substantially parallel to said first portion, which provides a good abutting surface against the second building component situated above the element.

In order to further facilitate the cutting-off, the slits extend along mainly half of the cross section of the element.

[0013] The element has such a cross section that the side surfaces emanating from the first portion converge upwards in the height direction. Apart from making the actual cutting or tearing easier, it becomes easier for the top part of the element to adapt to the shape of the other building component due to the smaller amount of material.

[0014] With a view to making it possible to adapt the height of the element more accurately, there can be two or more longitudinal weakening portions located at a mutual distance between the first and the second portion. If these weakening portions are designed as slits, they preferably emanate from the same wall surface of the element.

[0015] The element is preferably made from a flexible, elastic and preferably compressible material in order to provide as good an abutment as possible against the roof covering.

[0016] In the following, the invention will be described in further detail with reference to the schematic drawings, in which

Fig. 1 shows a perspective view of an element in a first embodiment of the invention,

Fig. 2 shows a perspective view of an element in a second embodiment of the invention, and

Fig. 3 shows a sectional view through a roof penetrating roof structure with a flashing and an element according to the invention.

The element shown in Fig. 1 and generally designated 1 has a substantially elongated shape and a pre-defined cross section which is substantially uniform in the shown embodiment. The element is designed with a first portion in the form of a bottom surface 2 adapted to abut on a first building component, in the described embodiment a flashing, and furthermore has two external wall surfaces in the form of side surfaces 3 and 4 as well as a top surface 5 which constitutes a second portion of the element. The cross section of the element 1 is in the embodiment shown mainly trapezoidal, as the side surfaces 3, 4 emanating from the bottom surface 2 converge upwards in the height direction and end in a top surface 5 which is narrow in comparison to the bottom surface 2. The element 1 is preferably made from a flexible, elastic and compressible material i.e. a soft foam plastic.

[0017] As shown in Fig. 3, with its bottom surface 2 the element 1 is, in a mounted position, fixed to a protruding leg 10 of a substantially L-shaped flashing rail 9. The fixation of the element 1 can take place in any suitable way, i.e. by affixing double adhesive tape to the bottom surface 2 of the element 1, said tape being covered by a covering foil when delivered. The flashing rail 9 makes up part of a flashing arrangement which aims at providing a substantially weatherproof transition between a roof-penetrating structure 11, e.g. the frame of a roof window, and a second building component in the form of a surrounding roof covering 13, 14. The flashing arrangement may be formed as an entire frame constructed from differently shaped parts. The L-shaped flashing rail 9 is overlapped at the top end by a metal cap 12, which creates a screen against the weather for the roof-penetrating structure.

[0018] When installing a roof-penetrating structure in an existing roof, the roof covering at the building-in position is removed prior to mounting the actual structure and the surrounding flashing. At the subsequent re-establishing of the roof covering, it will normally be necessary to adapt the shape of the individual parts in order to secure a suitably sized overlap between the roof covering and the flashing. In principle, the same circumstances apply when installing roof-penetrating structures in new roofs or when completely renovating a roof structure.

[0019] As suggested in Fig. 3, which shows a roof covering made from roof tiles 13, 14, the roof tile 13 located closest to the structure 11 is cut to size in the longitudinal direction. In order to adapt the height of the element 1 to the profiling of the roof covering, the element 1 is provided with a number of longitudinal weakening portions located at a distance from the bottom surface 2.

[0020] In the embodiment shown in Fig. 1, the weakening portions are designed as two slits 6,7 emanating from one of the side surfaces 3 of the element and extending approx. half-way through the cross section of the

element 1. The slits 6,7 are preferably parallel to one another and to the bottom surface 2, and in the embodiment shown, they are positioned such that the lower slit 6 is situated at a relatively short distance from the bottom surface 2, while the upper slit 7 is situated approx. in the middle of the extension of the side surface 3 in the height direction. In the state shown in Fig. 3, the element 1 is thus cut along the upper slit 7. As the element 1 is furthermore made from a deformable material, the upper section of the remaining part of the element 1 is adapted to the profiling of the roof tile by abutment on the portion 13a.

[0021] In the following, an alternative embodiment of element will be described with reference to Fig. 2. Elements with the same or analogue function as in the embodiment in fig. 1 carry the same reference numerals with the addition of '.

[0022] In this embodiment, each of the three weakening portions 6', 7', 8' are designed as a cavity extending in the longitudinal direction of the element. In the embodiment shown, each cavity 6', 7', 8' has a substantially oblong cross-sectional shape with rounded edges, but other shapes are possible, just as it is an option to shape each weakening portion as a row of cavities located next to one another. In the embodiment shown, the cavities have a size such that the outer edges hereof are situated at a distance from the side surfaces 3' and 4' of the element. The cavities can furthermore be provided with one or more actual slits (not shown), extending from the cavity and outwards at a random angle against an external wall surface of the element. The external wall surfaces can furthermore be provided with markings to indicate the location of the cavities.

[0023] The longitudinal weakening portion can be shaped in ways other than the slits and cavities shown and described. The element can thus be made with portions having a smaller material thickness or made from a material with a lower density than the remaining material, just as the number of weakening portions and the mutual position hereof in the height direction of the element is variable. Further cutting of the element in the direction of the roof slope can also be carried out.

[0024] Even though in the above, only the use of an element in connection with a side flashing has been shown, the element can of course also be used for sealing between e.g. a valley gutter and a roof covering located in the direction of the roof slope above the roof-penetrating structure. The use of the element is not limited to flashing of newly built roof-penetrating structures, as the element can also be used for the provision of a sealing transition between existing roof-penetrating structures, including vertical walls, and a surrounding or abutting roof covering. The element can i.e. also be used for sealing between the ridge tiles and the top row of roof tiles and at the base of the roof in connection with the bottom row of tiles.

Claims

1. A method of providing a sealing transition between two building components, comprising the steps of providing a sealing element (1;1') having an elongated shape and a cross section pre-defined in the longitudinal direction of the sealing element and including a first portion (2; 2') and a second portion with a predetermined dimension between the two portions, said sealing element further including at least one weakening portion (6, 7; 6', 7' 8') extending in the longitudinal direction of said sealing element, said weakening portion (6, 7; 6', 7' 8') being situated at a distance from said first portion (2; 2'), an external wall surface (3, 4; 3', 4') of said sealing element being provided with means indicating the location of said weakening portion, said means being in form of markings or the weakening portion itself, connecting said first portion (2;2') of the sealing element to a first building component, adapting the height of said sealing element to a second building component, by cutting or tearing superfluous parts away along said at least one weakening portion, and abutting said second portion against said second building component.
2. A sealing element (1) for use in the method of claim 1, said sealing element having an elongated shape and a cross section pre-defined in the longitudinal direction of the sealing element and including a first portion (2) and a second portion with a predetermined dimension between the two portions, the first portion (2) being in the form of a bottom surface adapted to abut on a first building component, the second portion comprising side surfaces (3, 4) running from said first portion (2), the sealing element (1) having such a cross section that the side surfaces (3, 4) running from said first portion (2) are converging upwards in the height direction, **characterized in that** said sealing element is provided with at least one slit (6, 7) emanating from a wall surface (3) of the sealing element (1) and extending substantially parallel to said first portion (2) and in the longitudinal direction of said sealing element, the at least one slit (6, 7) being situated at a distance from said first portion (2) and extending approximately half-way through the cross section of the sealing element (1).
3. A sealing element according to claim 2, **characterized in that** there are two or more longitudinal slits (6, 7) located at a mutual distance between said first and second portions.
4. A sealing element according to claim 3, **characterized in that** each of said slits (6, 7) emanate from the same external wall surface (3) of the sealing el-

ement.

5. A sealing element according to any one of claims 2 to 4, **characterized in that** the sealing element (1) is made from a flexible, elastic and preferably compressible material.
6. Use of a sealing element according to any one of claims 2 to 5 between a flashing (9) surrounding a roof-penetrating structure (11), and a surrounding roof covering (13, 14).
7. A flashing arrangement comprising a flashing rail (9) and a sealing element (1) according to any one of claims 2 to 5 fixed to said flashing rail.

Patentansprüche

1. Verfahren zur Bereitstellung eines Dichtungsübergangs zwischen zwei Gebäudeteilen, umfassend die folgenden Schritte:
 - Bereitstellung eines Dichtungselementes (1; 1') mit einer langgestreckten Form und einem in Längsrichtung des Dichtungselementes vordefinierten Querschnitt und umfassend einen ersten Abschnitt (2; 2') und einen zweiten Abschnitt mit einer vordefinierten Dimension zwischen den beiden Abschnitten, wobei das Dichtungselement ferner zumindest einen sich in Längsrichtung des Dichtungselementes erstreckenden Schwächungsabschnitt (6, 7; 6', 7', 8') umfasst, welcher Schwächungsabschnitt (6, 7; 6', 7', 8') in einem Abstand zum ersten Abschnitt (2; 2') angeordnet ist, wobei eine äußere Wandfläche (3, 4; 3', 4') des Dichtungselementes mit Mitteln versehen ist, welche die Anordnung des Schwächungsabschnitts anzeigen und in der Form von Markierungen oder aus dem Schwächungsabschnitt selbst ausgebildet sind,
 - Verbinden des ersten Abschnitts (2; 2') des Dichtungselementes mit einem ersten Gebäudeteil,
 - Anpassung der Höhe des Dichtungselementes an ein zweites Gebäudeteil durch Abschneiden oder Abreifen überschüssigen Materials entlang von dem zumindest einen Schwächungsabschnitt, und
 - Anlage des zweiten Abschnitts an dem zweiten Gebäudeteil.
2. Dichtungselement (1) zur Verwendung bei dem Verfahren des Anspruchs 1, welches Dichtungselement eine langgestreckte Form und einen in Längsrichtung des Dichtungselementes vordefinierten Querschnitt aufweist und einen ersten Abschnitt (2) und einen zweiten Abschnitt mit einer vordefinierten Di-

mension zwischen den beiden Abschnitten umfasst, wobei der erste Abschnitt (2) die Form einer zur Anlage an einem ersten Gebäudeteil angepassten Bodenfläche aufweist, und der zweite Abschnitt Seitenflächen (3, 4) aufweist, die ausgehend vom ersten Abschnitt (2) verlaufen, wobei das Dichtungselement (1) einen solchen Querschnitt aufweist, dass die vom ersten Abschnitt (2) ausgehend verlaufenden Seitenflächen (3, 4) nach oben in der Heihenrichtung konvergieren,

dadurch gekennzeichnet, dass das Dichtungselement mit zumindest einem von einer Wandfläche (3) des Dichtungselementes (1) ausgehenden Schlitz (6, 7) versehen ist, welcher sich im Wesentlichen parallel zum ersten Abschnitt (2) und in Längsrichtung des Dichtungselementes erstreckt, wobei sich der zumindest eine Schlitz (6, 7) in einem Abstand zum ersten Abschnitt (2) befindet und sich annähernd halbwegs durch den Querschnitt des Dichtungselementes (1) hindurch erstreckt.

3. Dichtungselement nach Anspruch 2, **dadurch gekennzeichnet, dass** zwei oder mehr langgestreckte Schlitze (6, 7) in einem gegenseitigen Abstand zwischen dem ersten und dem zweiten Abschnitt angeordnet sind.
4. Dichtungselement nach Anspruch 3, **dadurch gekennzeichnet, dass** jeder der Schlitze (6, 7) von derselben äußeren Wandfläche (3) des Dichtungselementes ausgeht.
5. Dichtungselement nach einem der Ansprüche 2 bis 4, **dadurch gekennzeichnet, dass** das Dichtungselement (1) aus einem flexiblen, elastischen und vorzugsweise komprimierbaren Material hergestellt ist.
6. Verwendung eines Dichtungselementes nach einem der Ansprüche 2 bis 5 zwischen einer Eindeckung (9), die eine ein Dach durchdringende Konstruktion (11) umgibt, und einer umgebenden Dachbeschichtung (13, 14).
7. Eindeckungsanordnung umfassend eine Eindeckungsschiene (9) und ein an der Eindeckungsschiene befestigtes Dichtungselement (1) nach einem der Ansprüche 2 bis 5.

Revendications

1. Procédé de réalisation d'une transition d'étanchéité entre deux parties de construction, comprenant les étapes de
réaliser un élément d'étanchéité (1; 1') présentant une forme allongée et une section prédéfinie dans la direction longitudinale de l'élément d'étanchéité et comprenant une première portion (2; 2') et une

deuxième portion avec des dimensions prédéterminées entre les deux portions; l'élément d'étanchéité comprenant en outre au moins une portion de faiblesse (6, 7; 6', 7', 8') s'étendant dans la direction longitudinale de l'élément d'étanchéité, la portion de faiblesse (6, 7; 6', 7', 8') étant positionnée à une distance de la première portion (2; 2'), une surface de paroi extérieure (3, 4; 3', 4') de l'élément d'étanchéité étant pourvue de moyens pour indiquer le positionnement de la portion de faiblesse, moyens qui sont dans la forme de marquage ou de la portion de faiblesse en soi,

relier la première portion (2; 2') de l'élément d'étanchéité à une première partie de construction, ajuster la hauteur de l'élément d'étanchéité à une deuxième partie de construction en découpant ou arrachant de la matière superflue le long de l'au moins une portion de faiblesse, et appuyer la deuxième portion contre la deuxième partie de construction.

2. Elément d'étanchéité (1) à l'usage dans le procédé selon la revendication 1, l'élément d'étanchéité présentant une forme allongée et une section prédéfinie dans la direction longitudinale de l'élément d'étanchéité et comprenant une première portion (2) et une deuxième portion avec des dimensions prédéterminées entre les deux portions, la première portion (2) étant dans la forme d'une surface inférieure agencée pour s'appuyer sur une première partie de construction, la deuxième portion comprenant des surfaces latérales (3, 4) s'étendant à partir de la première portion (2), l'élément d'étanchéité (1) présentant une telle section que les surfaces latérales (3, 4) s'étendant à partir de la première portion (2) convergent vers le haut dans la direction d'élévation,
caractérisé en ce que l'élément d'étanchéité est pourvu d'au moins une fente (6, 7) partant d'une surface de paroi (3) de l'élément d'étanchéité (1) et s'étendant essentiellement parallèlement à la première portion (2) et dans la direction longitudinale de l'élément d'étanchéité, l'au moins une fente (6, 7) étant positionnée à une distance de la première portion (2) et traversant environ à moitié la section de l'élément d'étanchéité (1).
3. Elément d'étanchéité selon la revendication 2, **caractérisé en ce que** deux ou plus de deux fentes longitudinales (6, 7) sont pourvues à un écartement l'une de l'autre entre la première et deuxième position.
4. Elément d'étanchéité selon la revendication 3, **caractérisé en ce que** chacune des fentes (6, 7) part de la même surface de paroi extérieure (3) de l'élément d'étanchéité,
5. Elément d'étanchéité selon l'une quelconque des re-

vendications 2 à 4, **caractérisé en ce que** l'élément d'étanchéité (1) est fait d'un matériau flexible, élastique et préférablement compressible.

6. Usage d'un élément d'étanchéité selon l'une quelconque des revendications 2 à 5 entre un raccordement (9) entourant une construction pénétrant un toit (11) et une couverture de toit entourante (13, 14). 5
7. Arrangement de raccordement comprenant un rail de raccordement (9) et un élément d'étanchéité (1) selon l'une quelconque des revendications 2 à 5, l'élément d'étanchéité étant fixé au rail de raccordement. 10

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