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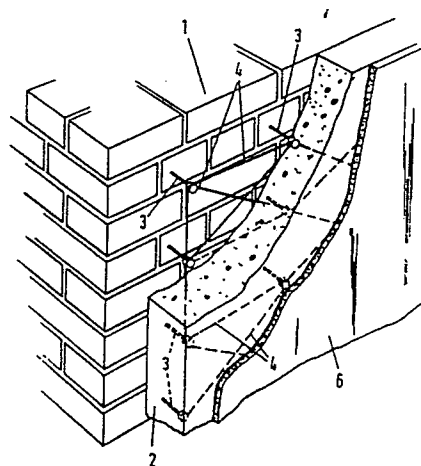
71 Applicant: **Van Neerbos Betonchemie B.V.**
Karolusstraat 2
NL-4903 RJ Oosterhout(NL)

72 Inventor: **Veldhoen, Hendrikus**
Spaandonk 55
NL-4907 ZK Oosterhout (N.Br.)(NL)

74 Representative: **Urbanus, Henricus Maria, Ir. et al,**
c/o Verenigde Octrooibureaux Nieuwe Parklaan 107
NL-2587 BP 's-Gravenhage(NL)

54 **Method of insulating a wall and wall insulated by application of said method.**

57 A method of insulating a wall (1), in particular a facade made of brickwork, concrete or the like mineral material, in which there is applied an insulating layer on the wall and a top or finishing layer on the insulating layer (2) whereby there is attached to the wall an anchoring (3, 4) which, through direct spraying of mortar against the wall, is embedded in a concrete layer forming the insulating layer (2).



TITLE MODIFIED
see front page

Façade insulation.

The invention relates to a method of insulating a wall, in particular of a façade made of brickwork, concrete or the like mineral material, there being applied on the wall an insulating layer and on the insulating layer a top
5 or finishing layer.

According to a prior art method of thus manufacturing a façade insulation, there is first applied on the façade, after cleaning same, an insulating layer by means of an adhesive layer, said insulating layer being mostly in the
10 form of a foam sheet, while subsequently on the foam layer there is glued a glass fibre mat whereon again there is applied the water-repellent finishing layer, e.g. an ornamental plaster layer.

This prior art method has a number of drawbacks,
15 such as the fact that the application of the foam layer requires a proper cleaning and smoothing of the façade, that three glueing operations have to be carried out and furthermore that this time-consuming method can only be executed by skilled personnel. The final result of the prior art
20 method also has drawbacks. The foam insulation layer as a matter of fact is vapour-inhibiting, so that between the façade and the foam layer vapour bubbles may be produced. the foam layer is relatively soft and consequently the façade is mechanically vulnerable. Furthermore, use is
25 made in the prior art method of various materials strongly

deviating as regards physical properties, while also the use of foam sheets sometimes entails the risk of fire through released vapours, while the life seems limited in view of the employed materials. Moreover, repairs are
5 complicated.

It is the object of the invention to avoid these drawbacks.

To this effect according to the invention, in a method as described in the above, an anchoring is secured
10 to the wall which is embedded, through direct spraying of mortar against the wall, in a concrete layer forming the insulating layer.

It will be clear that a substantial gain of time is achieved with the method according to the invention as
15 compared with the prior art technique, so that by this mere fact the method of the invention is already less expensive.

The simple anchoring for such a concrete layer, which itself has already some adhesion, even on uncleaned façade surfaces, can be simply formed according to the
20 invention by a number of anchors applied in the façade wall with a free end projecting from the wall, said free end being embedded in the concrete layer. Such anchors have a given elasticity which limit the chance of crack formation upon relative movements of façade wall and insulating
25 concrete layer.

For increasing the adhesion between the insulating concrete layer and the anchors, according to the invention,

the free ends of the anchors can be interconnected by threads which are likewise embedded in the insulating concrete layer.

The invention also concerns an insulated wall
5 provided with a concrete layer directly applied thereon, with an anchoring embedded therein and attached to the wall, and a top layer disposed on the insulating concrete layer.

The use of concrete instead of foam plastic for
10 forming an insulating layer has the advantage that concrete is vapour-transmissive by nature, so respiratory, so that the formation of vapour bubbles between façade and insulating layer is prevented. Moreover, concrete is a material that as regards mechanical properties, such as coefficient
15 of expansion, is much closer to the normal façade material, brickwork or likewise concrete, so that mutual dilatation differences are minimized. Concrete, moreover, is mechanically more resistant than foam plastic, so that the chance of damage to a wall insulated in accordance with the
20 invention is less than the insulated façade walls manufactured according to the prior art techniques. Since concrete can be sprayed, the façade need not be smoothed and as already mentioned in the foregoing, an elaborate previous façade cleaning is not necessary. Everything considered,
25 the façade insulation manufactured in accordance with the invention is not only less expensive than the prior art insulated façades, in that the application can be effected

quicker and with less skilled personnel, but moreover the properties, both the mechanical properties and the insulating properties, are better than those of façade insulations made in a known manner.

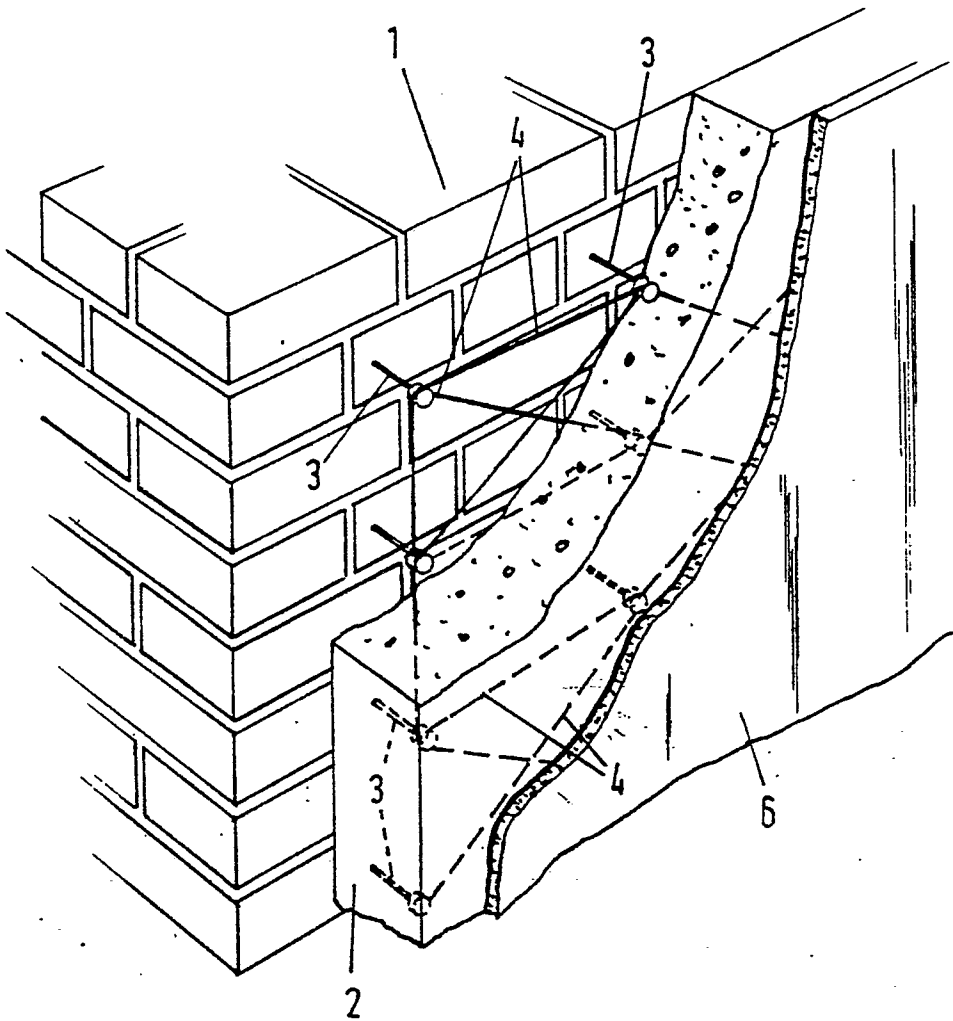
5 One embodiment of the façade insulation according to the invention will now be described, by way of example, with reference to the accompanying drawing.

 As shown on the drawing, depicting a detail of a façade insulated according to the invention, there is
10 sprayed directly against the façade wall 1, e.g. a one-brick masonry wall, a concrete layer 2, while previously a plurality of anchors 3 has been attached in the wall 1, projecting with their free ends from the wall 1. The free anchor ends are interconnected by an anchoring thread 4,
15 e.g. a glass fibre or nylon fibre.

 The ends of the anchors 3 projecting from the wall 1 and the anchoring threads stretched therebetween are entirely embedded in the sprayed concrete layer 2. Finally, a top or finishing layer 6 can be applied directly on the
20 concrete layer 2.

CLAIMS

1. A method of insulating a wall, in particular a
façade made of brickwork, concrete or the like mineral
material, in which an insulating layer is applied on the
wall and on the insulating layer a top or finishing layer,
5 characterized in that there is attached to the wall an
anchoring which, through direct spraying of mortar against
the wall, is embedded in a concrete layer forming the
insulating layer.
2. A method according to claim 1, characterized in that
10 the anchoring for the insulating concrete layer is formed
by a plurality of anchors which are applied in the wall and
having a free end projecting from the wall, which free end
is embedded in the concrete layer.
3. A method according to claim 2, characterized in
15 that the free ends of the anchors are interconnected by
threads which likewise are embedded in the insulating
concrete layer.
4. An insulated wall provided with a concrete layer
directly applied thereon with an anchoring embedded therein
20 and attached to the wall and a top layer applied on the
insulating concrete layer.
5. An insulated façade made through application of the
method according to any one of claims 1-3.





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EUROPEAN SEARCH REPORT

Application number

EF 80 20 0422

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DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int. Cl. '76)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
	FR - A - 2 293 540 (KALKSTEIN WERKE) * Page 2, lines 6-40; page 3, lines 1-11; figures * --	1,2,3, 5	E 04 B 1/76 E 04 F 13/04
	FR - A - 2 287 558 (JULIEN) * Page 2, lines 22-35; page 3, lines 1-35; page 4, lines 1-4; figures 1,2,3 * --	1-5	
	CH - A - 141 466 (LAMBRECHT) * Page 1, column 1, lines 18-24; column 2, lines 1-19; figures 1-3 * --	2,3	TECHNICAL FIELDS SEARCHED (Int. Cl. '76) E 04 B E 04 F
	GB - A - 1 124 849 (SHELL) * Page 2, lines 35-92; figures 1,2,3,4 * --	2,3	
A	DE - A - 2 042 735 (LESCHUS) * Page 8, lines 4-18; page 9, lines 1-17; figures 1,2,3 * --	1	
A	FR - A - 588 742 (BAUDELOT) * Page 1, lines 1-52; figures 1,2 * --	1,2,3	CATEGORY OF CITED DOCUMENTS X: particularly relevant A: technological background O: non-written disclosure P: intermediate document T: theory or principle underlying the invention E: conflicting application D: document cited in the application L: citation for other reasons
A	GB - A - 240 705 (BOOT) * Page 2, lines 18-55; figures 1,2,3 * ----	1,2,3, 4	
☒ The present search report has been drawn up for all claims			&: member of the same patent family, corresponding document
Place of search The Hague		Date of completion of the search 13.08.1980	Examiner SCHOLS