

Title (en)

Venting device for reinforced concrete building components containing closed cavities or weight-reducing elements

Title (de)

Entlüfter für Stahlbeton Bauelemente mit Hohlräume oder gewicht reduzierende Elemente

Title (fr)

Dispositif de ventilation d'un élément de construction en béton armé avec des cavités ou éléments à réduction de poids

Publication

EP 1449977 A1 20040825 (EN)

Application

EP 04003596 A 20040218

Priority

IT MI20030292 A 20030218

Abstract (en)

The device (10) is applicable to prefabricated predalle slabs or curtain panels provided with weight-reducing elements or with closed cavities, and used for constructing reinforced concrete floors or walls. It comprises a tubular element (12) a first end (28) of which is open, the relative end portion (26) being inserted or insertable into a weight-reducing element. The remaining part (14) of the tubular element (12) is embedded into the newly cast base (16) of the predalle slab or of the panel during its prefabrication. The second end of the tubular element (12) is closed by a closure element (18) the outer surface of which is intended to at least partly rest on the bottom of the formwork in which the base (16) is cast. The closure element (18), or at least that portion (20) thereof corresponding to that outer surface intended to rest on the formwork, is of a material which loses consistency or is eliminated as a result of its exposure to the high temperatures of the fire, as is the layer of mortar below the closure element (18). In this manner an opening is created which enables the gases present in the cavities or deriving from the material forming the weight-reducing elements to vent through the tubular element (12). Because of this vent, the temperature increase caused by the fire does not result in a corresponding pressure increase of said gases, hence preserving the structural integrity of the floor or of the wall. <IMAGE>

IPC 1-7

E04C 2/288; **E04B 5/02**

IPC 8 full level

E04B 5/02 (2006.01); **E04B 5/38** (2006.01)

CPC (source: EP)

E04B 5/04 (2013.01); **E04B 5/38** (2013.01)

Citation (search report)

- [A] EP 0136252 A2 19850403 - STEINBACH & VOLLMANN
- [A] US 3803784 A 19740416 - BECKER O
- [A] US 4084362 A 19780418 - PIAZZA MATTHEW R

Cited by

DE102011077657A1; ITBG20110043A1; EP2535472A2

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