Title (en)

SMOKE PROTECTION FOR ROOMS

Title (de)

RAUCHSCHUTZ FÜR RÄUME

Title (fr)

PROTECTION DE LOCAUX CONTRE LA FUMEE

Publication

EP 1440242 B1 20060614 (DE)

Application

EP 02802275 A 20021031

Priority

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Abstract (en)

[origin: WO03038283A2] The invention relates to a method and a device for keeping escape and rescue paths free of smoke, whilst taking into account permissible pressure differentials between adjacent corridors and stairwells, by means of a pressurization unit. A by-pass flow is generated around a building with an axial ventilator by means of a system of flaps which are self-closing, with the guarantee that the flaps open under the effect of a given over-pressure in the escape path and thus release the by-pass. The moments for opening the flaps are set such that the pressure forces or pneumatic forces of the flow in the by-pass are sufficient and the moments for closing the flaps are provided by a mechanical tension- or compression-spring system. The cross-over point of both moment curves determines the maximum of the self-regulated opening area of the flaps, giving an independent, directly-acting regulation system as a result of pressure changes in the escape path, which opens with a reaction time corresponding to the maximum escape path height or escape path length taking account of the speed of sound and closes with a reaction time proportional to the mass moment of inertia / restoring moment of the spring system of the flaps.

IPC 8 full level

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