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Gutachterliche Stellungnahme

20080116-TI01-12564-172068741

Expert Statement

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Object:

**Use of point smoke alarms
for lift shaft smoke exhaust**

Date:

16.01.2008

In the statement SMH-H/EH29/2006 a smoke suction system (RAS) is described for automatic smoke detection in the lift shaft that does not represent an apparatus from a trade outside the lift system and that fulfils all the safety requirement for use in the lift shaft.

This statement refers to the use of the point smoke alarms taking into account current norms and VdS guidelines.

Alarm selection

Smoke alarms are to be installed in lift shafts because of the expected risk to persons. In accordance with DIN VDE 0833-2 (2.2004) other alarm types, e.g. heat alarms, are not suitable in line with point 6.1.5.2.

Space height

A maximum space height of 12m is prescribed in DIN VDE 0833-2 (2.2004) under point 6.2.7.1 in table 2 for the used of smoke alarms in accordance with DIN EN 54-7. This means that lift shafts higher than 12 are not allowed to be fitted with point smoke alarms.

Unhindered smoke flow

DIN VDE 0833-2 (2.2004) demands in point 6.2.7 that the automatic fire smoke alarm can be accessed without hindrance by the fire feature of smoke. The hindrance of smoke flow caused by the lift cabin means this demand cannot be fulfilled.

Relevance for insurance purposes

The VdS guideline 2095 confirms the demands in the above-named DIN VDE 0833-2 (2.2004) in principle.

Summary

1. Point smoke alarms in the lift shaft are, in principle, apparatus separate from the lift in the sense of the lift guidelines 95/16/EC, TR 200 and DIN EN 81-1 and -2.
2. The use of point, automatic smoke alarms in the lift shaft is not admissible as the space height is limited to 12 metres and the smoke does not reach the smoke alarms or only reaches them with significant delay because of the hindrance by the lift cabin. The movement of the lift to the determined level (fire level) is therefore also delayed or prevented (EN81-73 lift movements in the event of fire).
3. The smoke suction systems used in the lift shaft smoke exhaust system LIFT SMOKE CONTROL fulfil all the above-named requirements and are particularly suited to smoke detection in the lift shaft.


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