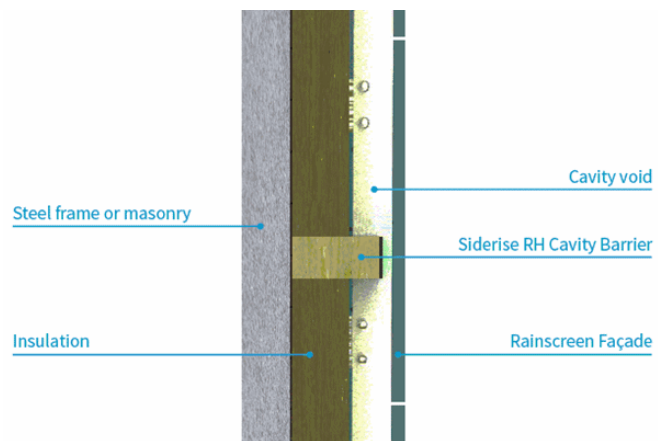


3. AVOIDING FIRE MOVEMENTS VIA THE AIR CAVITY BY USING CAVITY-CLOSERS

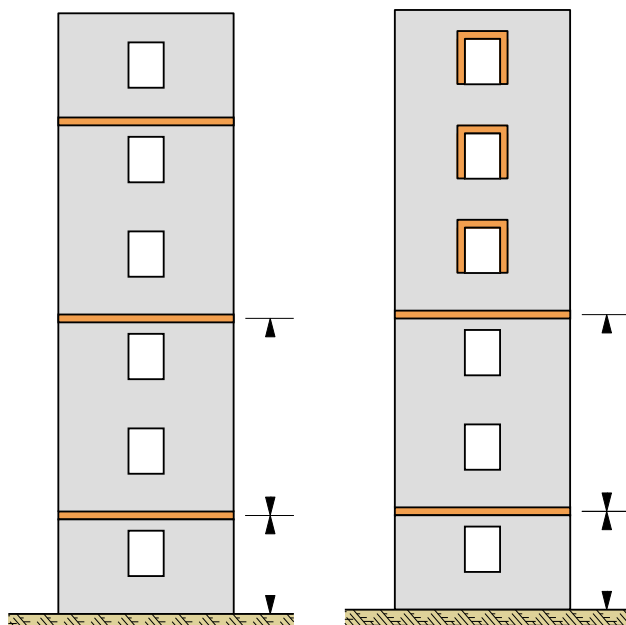
TWEHA, 2020

With regard to the ventilated façade, a fire like this causes an acceleration in the vertical air flow in the air cavity as a result of the difference in density of warm and cold air. This accelerated transport of smoke and fire must be frustrated.

Fire spread through the ventilated air cavity must be prevented. This can be achieved by providing the ventilation cavity with fire-resistant "cavity closers" or "cavity-barriers". They must be designed in such a way that they allow the airflow behind a ventilated façade in normal use and block the cavity when exposed to fire.



A cavity closer or cavity closer (fire reaction class A2-s3, d0) will help improve the fire safety of the building because in the event of a fire, they help to prevent flames and smoke from spreading through the air cavity for 30 or 60 minutes, thus reducing the risk of fire flashover. A cavity closer or cavity closer (fire reaction class A2-s3, d0) will help improve the fire safety of the building because in the event of a fire, they help to prevent flames and smoke from spreading through the air cavity for 30 or 60 minutes, thus reducing the risk of fire flashover will be highly limited.



Materials used in cavity closers are sensitive to high temperatures and will swell in a fire, closing the air cavity and thus frustrating airflow in the air cavity. The fire-resistant protection with cavity closers can be implemented in two ways:

- either it is placed over the entire width of the facade
- or a horizontal and vertical strip is placed around each facade opening (top and sides)

Recommend placing the first layer of cavity closer at the level of the second floor. However, the vertical distance between this fire protection and the ground level may not exceed 4 m. Then apply a continuous horizontal cavity closer every two stories over the full width of the facade. Optionally, one can also opt for a variant by placing a horizontal cavity closer at the top and vertically along both sides of each window opening. The use of cavity closers will significantly improve the fire safety of the facade construction.

read more:

'LINK FIRE PREVENTION TO FAÇADE CLADDING'

'POSSIBLE FIRE-RISK-TAKING MOVEMENTS VIA THE FAÇADE'

'IMPLEMENTATION OF FAÇADE CONSTRUCTION'