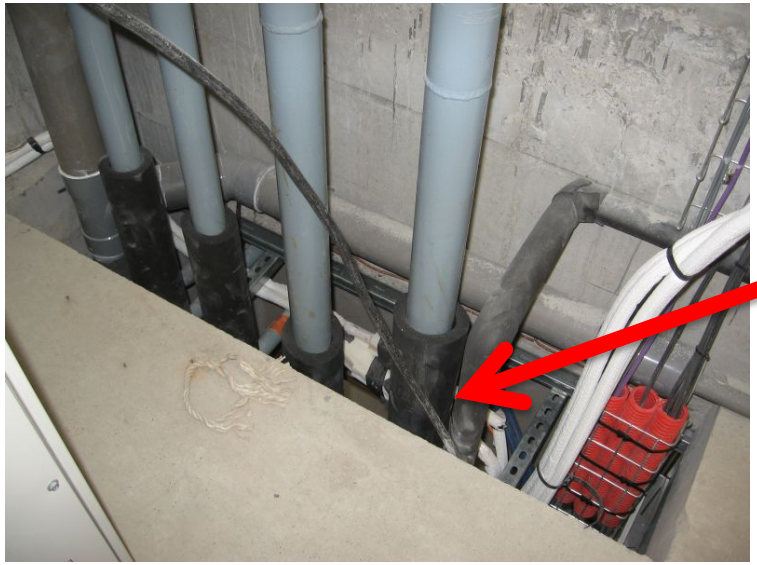
Examination during construction of large buildings

Checking the air barrier for quality assurance purposes

Purpose of an examination during the construction process

The examination of the air barrier serves **quality assurance of air barrier**.

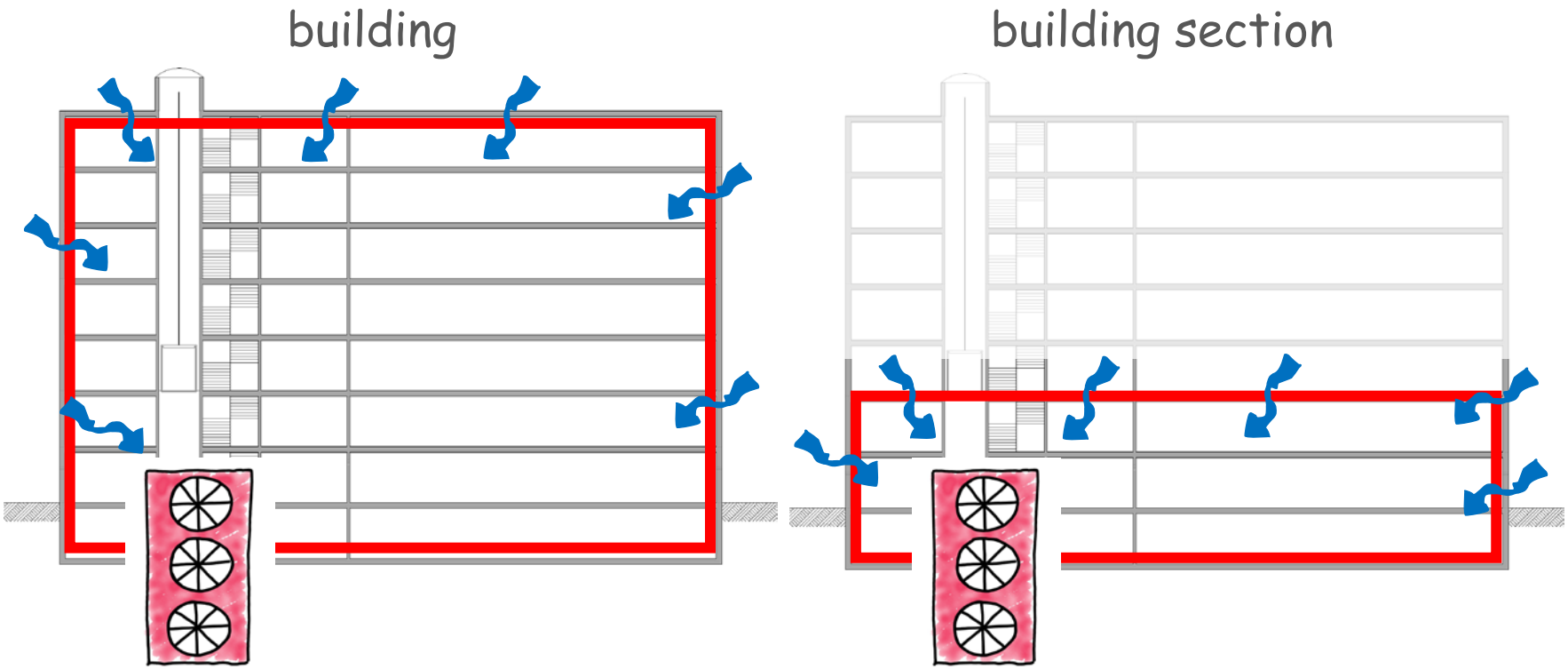
Defects in the component layers, the so-called primary leakages, can be **easily located** during this construction phase and **eliminated without great effort**.



Large void
in a slot
due to pipe
penetrations

Examination of the entire building / building section

With one or more measuring fans, the **building** or **building section** is set to approx. **50 Pascal negative pressure**. As a result, **outside air flows in through the defects in the building envelope**.



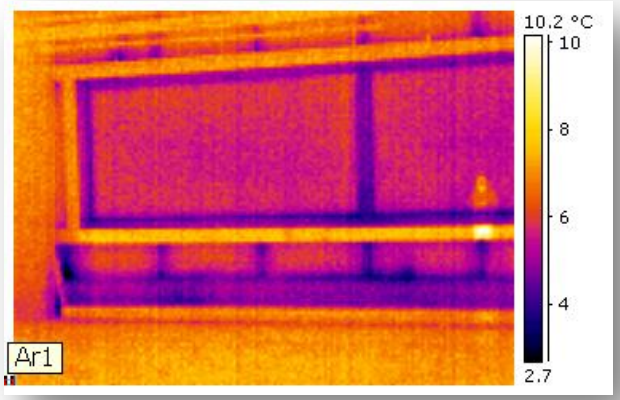
Leakage location at the building envelope

The **air flow** can be **felt** by hand, measured with a **thermoanemometer** or made visible with a **thermal imaging camera**.

Fog helps to follow the flow paths of the air.

anemometer

thermogram

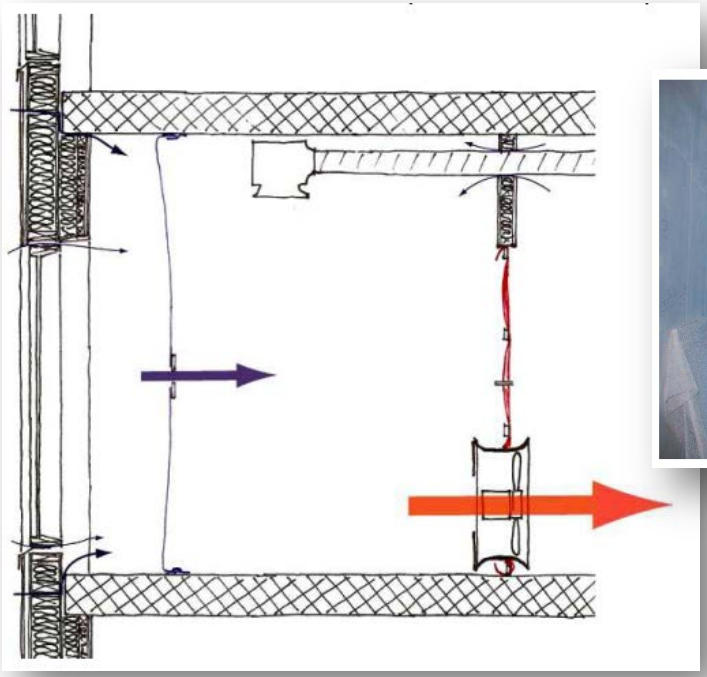


Air permeability measurement of large-area components

Are large-surface components sufficiently airtight in their surface? This can be determined with special measurements, for example with the Micro Leakage Meter.

Fotos: © ISOPROC

Air permeability measurement of a part of a facade



As soon as a representative section of the building has been completed, the first parts of the façade can be inspected.

Fotos / Grafik: © Lars DUE, ISOLINK

Literature

- Vogel, Klaus; Sous, Silke; Zöller, Matthias; Grün, Gunnar; Norrefeldt, Victor (AIB, FLiB, IBP): Bewertung von Fehlstellen in Luftdichtheitsebenen – Handlungsempfehlung für Baupraktiker; Forschungsinitiative Zukunft Bau, Band F 3012, 2017

- various information sheets of FLiB, e.g.
  - Auftragsklärung, 06/2018
  - Baubegleitende Messung, 10/2018
  - Leckagedefinition 1, 12/2017
  - Ausschreibungsbeispiel
- Due, Lars: The Blower Door measuring method "Bestimmung der Fugendurchlässigkeit von Fenstern und Fugen" used for decision of large buildings air tightness, BuildAir Symposium 2012