



POST OF 08/08/2026

Reading crack patterns: The comparison chart

Almost every walk-through turns up cracks. The work does not lie in finding them but in classifying them: which one is normal, which one is an early warning, which one has to be dealt with immediately. How a crack runs tells you more than how wide it is.

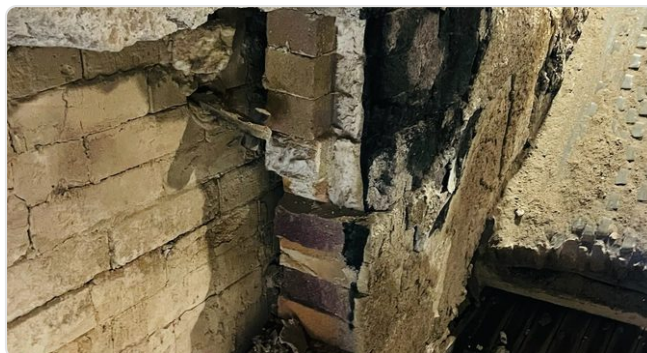
Three questions decide the classification: has it changed since the last record? Does it go right through? And where does it sit — the same crack is an immediate case in the bath line and a note for the next turnaround in the upper furnace.

Six findings and what they mean

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| ☐ Fine network across the surface | drying and shrinkage cracks after the first heat-up. Monitor, as long as they do not open up and do not discolour |
| ☐ Straight through-crack along the component | the lining has created the expansion joint for itself that the design left out. Plan it in for the next turnaround |
| ☐ Crack along a change of material | different expansion at the transition. Monitor — filling does not remove the cause, which lies in the build-up |
| ☐ Compressed expansion joint | announces damage long before the wall deforms. Document the joint pattern and take it into the planning |
| ☐ Crack with discolouration or efflorescence | medium has already passed through — an infiltration finding. Act immediately, regardless of the width |
| ☐ Spalling with falling residual wall thickness | above a critical crack density segments come loose and hot gases penetrate deeper. Act immediately |



Cracked and discoloured surface with spalling — act immediately



Crack at the transition from brickwork to monolithic castable — monitor

Common mistakes

- Measuring only the width: a fine crack with discolouration is more serious than a wide one without.
- Assessing without a comparison image — with no photo from the last visit, every crack is a first finding.
- Trying to tell a surface crack from a through-crack from the inside: only thermography from the outside separates the two reliably.

PRACTICAL NOTE

Photograph and date every crack pattern at the same spot as last time. Only the comparison between two visits turns a crack into a finding — and decides whether to monitor, to plan or to act immediately.

Questions about your furnace?

We assess lining, zones and condition — with a reply within 24 hours on working days.

+49 89 541 960 200

info@sbs-rs.de

www.sbs-rs.de/en/fachwissen