



POST OF 16/07/2026

Casting instead of bricking: the decision zone by zone

Brick refractory has 20–30 joints per running metre — each of them a possible path for infiltration and corundum. A monolithic cast lining has none.

In return it demands three things that brickwork does not: load-bearing anchoring, tight formwork and a controlled dry-out of typically 2–5 days. The decision is therefore not taken per furnace, but per zone.

Decision guide zone by zone

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| ☐ Complex geometry | corners, inclines, penetrations, ramps -> cast: follows the shape without fitting work |
| ☐ Burning bed / bulk material abrasion | mechanically abraded zones -> fired brick: the structure is finished, hardness from day one |
| ☐ Bath line and metal contact | dense surface with few joints -> cast with a special castable |
| ☐ Fast partial repair | individual bricks can be swapped — in a monolith a whole panel has to be broken out |
| ☐ Shutdown window | short window with no dry-out time -> brick; plannable shutdown -> cast including heat-up curve |
| ☐ Transitions | where the two meet: interlock, never straight — otherwise the seam is the predetermined breaking point |

*Jointless monolithic casting**Hearth lining with formwork*

Common mistakes

- Casting without consistent anchoring: the castable hangs on the anchor — without it, all that holds it in the furnace is itself.
- Dry-out shortened "by feel": steam pressure blows the surface apart before the furnace has ever produced anything.
- Material chosen from the price list instead of by zone: the cheapest wall is the one that does not have to be opened up again next year.

PRACTICAL NOTE

With every quotation, ask: which zone is bricked and why, which is cast — and how is the transition executed? The answer tells you what kind of refractory installer you are dealing with.

Questions about your furnace?

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

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