



POST OF 16/09/2026

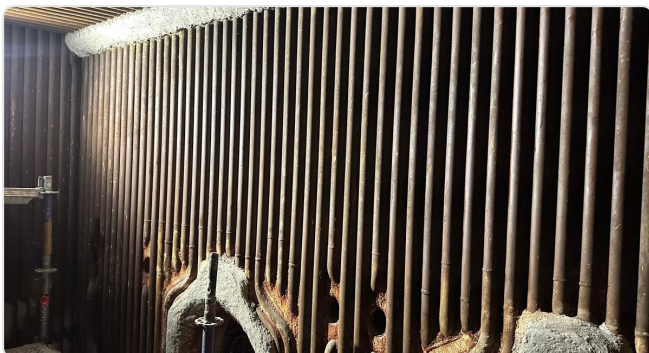
Refractory on the tube wall: The inspection points

In a boiler, the refractory has two jobs at once: it protects the tubes against erosion and corrosion, yet it must not block the heat. Too much castable costs boiler output, too little costs tubes.

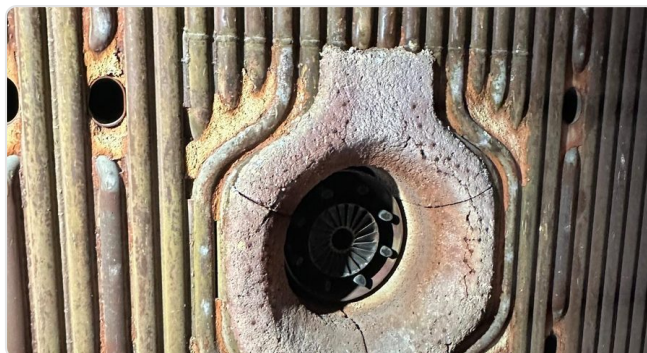
Three principles decide: only as much castable as necessary, openings first, anchors on the fins and never on the tube.

Checklist for lining a tube wall

- | | |
|---|---|
| ☐ Attack zones | defined where erosion and corrosion actually attack; only those areas are lined |
| ☐ Layer thickness | thin, dense and cleanly screeded, no extra castable as a reserve |
| ☐ Openings | for burners, nozzles and sight holes first, precisely fitted, edges rounded |
| ☐ Anchors | welded only onto the fins between the tubes, never onto a tube |
| ☐ Welds | every single one inspected and documented before the castable is applied |
| ☐ Transitions | to the unprotected tube wall without a step where ash can build up |
| ☐ Heat-up | to the curve: the mixing water in the castable needs time |



Boiler tube wall: refractory only where it is attacked



Opening in the tube wall: precisely fitted, edges rounded

Common mistakes

- A thick layer "to be safe": the tubes absorb less heat and the boiler loses output.
- Anchors welded onto the tube: an intervention in the pressure-bearing boiler itself.
- The plain surface first and the openings last: that is exactly where the castable cracks first.

PRACTICAL NOTE

Define the attack zones during the shutdown with photos and wall thickness measurements of the tubes. Then only the areas that protect the tubes are lined, and the boiler keeps its output.

Questions about your furnace?

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

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