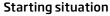
# REFRACTORY RELINING FOR A HEARTH-TYPE MELTING FURNACE

Aluminium GmbH Nachrodt



Refractory relining for a hearth-type melting furnace including development, assembly during ongoing production, and consideration of specific customer requirements.

#### Solution

RATH's engineering team developed an efficient construction solution with the components in the ground and in the side wall, despite the furnace being tiltable to both sides.

## The following were used:

Precast concrete elements, LC concrete, shotcrete, insulating bricks, lightweight refractory bricks and slabs

## Challenges overcome:

Surveying on site, complete bath area with prefabricated components, bath volume concept incl. formation of a melt ramp with increased bath volume, conversion during ongoing production with rail-bound charging, and cleaning manipulation

#### Other services:

Consultation and coordination with other trades, demolition of the existing refractory lining using robot technology, site setup, and heating up

# The benefits:

- Long service life of the refractory lining
- · High operational reliability
- Low wear
- Optimized cleaning

- Higher quality thanks to prefabricated, heat-treated and factory-tested components
- Very smooth surfaces with lowest open porosity of all components used in the bath area for increased resistance to infiltration

"RATH was more than convincing in this project, with high technical competence and smooth project handling."

**Frank Hildebrandt** Plant Manager Aluminium GmbH Nachrodt



Aluminum smelting furnace during assembly



Newly lined aluminum smelting furnace



Components on a tunnel kiln car after firing



