

Rotary Kiln

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The rotating kiln is integrated into the semitechnical pilot plant BRENDA, whereas the dust firing is part of the subsequent afterburning chamber. In addition, the plant consists of a waste heat boiler with flue gas treatment according to the requirements of 17. BImSchV.

With a versatile fuel feeding system, fuels of variable texture (gaseous, liquid, pasty or solid) and package size level can be fed into the combustion system. The pilot plant has a total thermal output of approx. 2.5 MW.

The pilot plant is mainly used for process optimization studies. For example, a process was developed by which pollutant emissions from transient combustion processes can be prevented.

By adapting the flame monitoring, the burner throughput of problematic liquid fuels was optimized. By adapting the combustion management, the ash/ slag quality of the rotary tube was improved significantly.

Related to the studies, coverings and deposits on the walls of the boiler are characterized by mineralogical-chemical studies in order to counteract boiler corrosion and high maintenance costs.

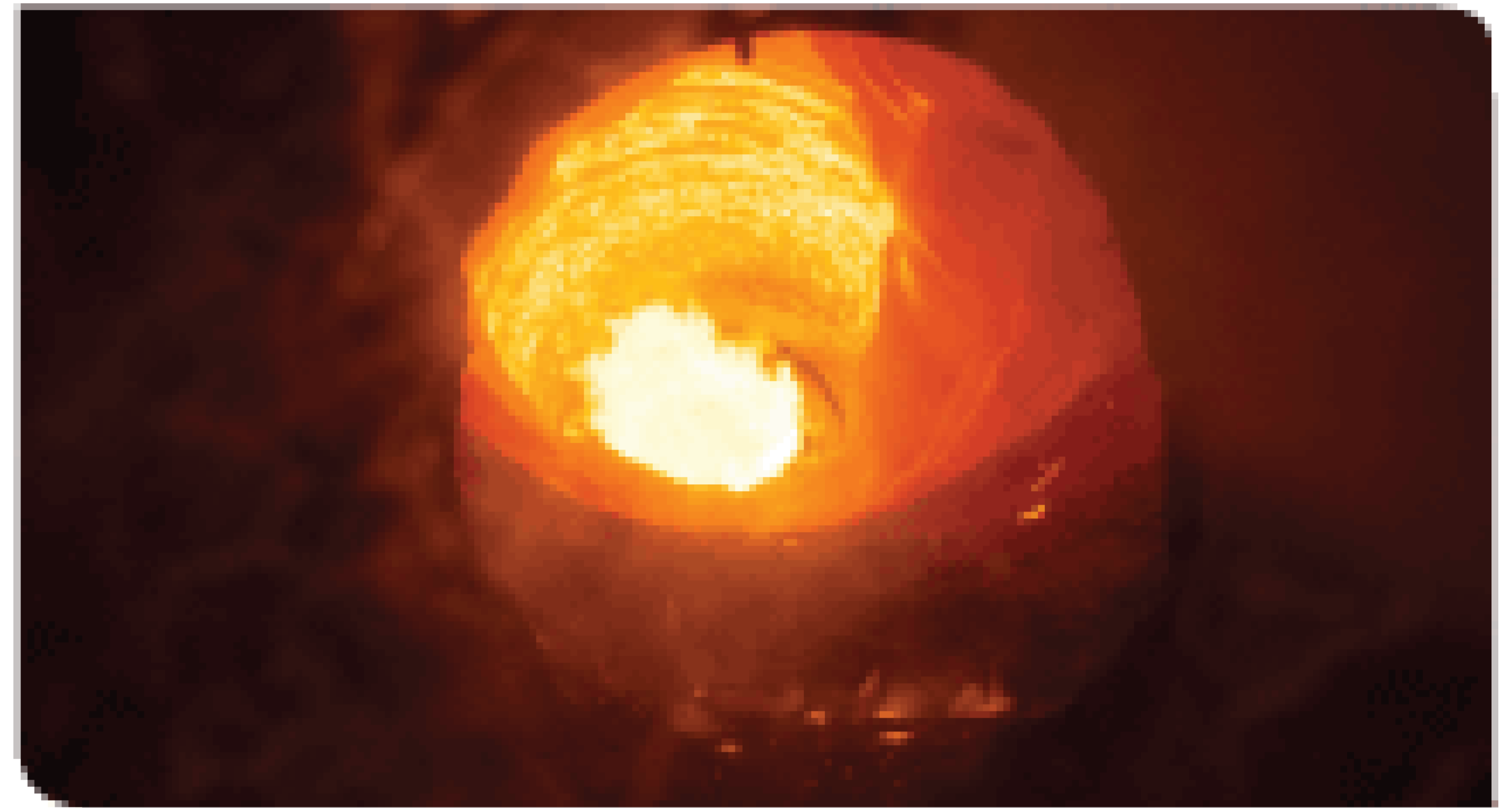


Figure 1: Oil firing inside the rotary tube with depositions on the walls

Source: KIT

Performance data rotary kiln

Total thermal output	1.5 MW
Length of rotary tube	8 m
Diameter of rotary tube	1,8 m
Special fuels, transformer oil, slurry (on request)	50 up to 200 kg/h
Type of burner: Oil and gas burner, solids, pasty oils	
Solid fuels and bundle via chute	
Flue gas treatment according to 17. BImSchV.	

For further Information go to:
<https://www.itc.kit.edu/>

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