



The art of modern calcining

Proven design - highest process flexibility - stable premium products

The Annular Shaft Kiln (ASK) serves the purpose of producing **high to medium reactive lump lime**. The kiln type is specialized for applying a gentle calcination process to the respective limestone. Due to close to stoichiometric combustion conditions the off-gases produced qualify for further usage.

A special feature of this kiln type is its process operation according to the classic counterflow principle, which is extended by a co-current burning zone. Due to moderate burning conditions within this zone, a high reactivity of the lime product is produced.

The lumpy raw material is transported by skip or belt into an airlocked feeding system at the kiln top. Any type of fossil fuel may be applied and is supplied at two levels via externally attached combustion chambers.

In contrast to other state-of-the-art vertical shaft kilns, the ASK is operated at a negative pressure and draws the air required for cooling the product from the lime discharge underneath the kiln.

The ASK is of traditional design and well established in the field of lime production for the steel industry, precipitated calcium carbonate (PCC) and soda plants, where the high content of carbon dioxide in the off-gas is mandatory.

Annular Shaft Kiln

Fields of application

Calcination of limestone and dolomite to soft and medium burnt lime

Usage of carbon dioxide in the exhaust for PCC production

Main features

Availability of the kiln > 98%

Stone size 15 to 200 mm in a range of max. 1:4 possible

29 to 34% CO₂ in the exhaust depending on the fuel type

Initial washing of the feed not necessary

Residual CO₂ of < 1% easily reachable

Feed moisture content up to 10% possible

Maintenance possible anytime due to suction draught operation

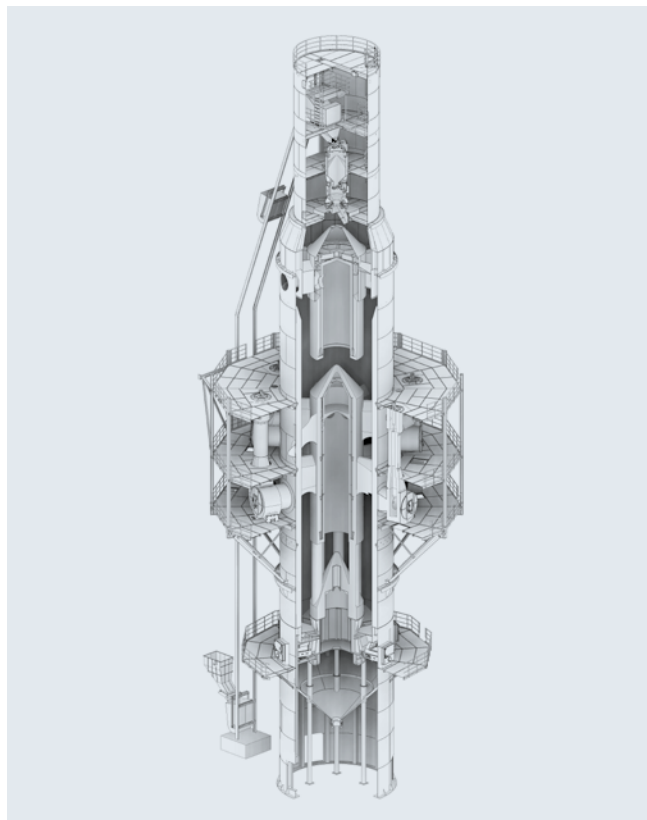
Design parameters

Outside diameter: 5.7 to 8.6 m

Specific heat consumption:

- 870 – 940 kcal/kg for calcination of limestone
- 820 – 900 kcal/kg for calcination of dolomite

Daily output: 200 to 600 tons



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