Application field: Building Materials

Material: Hard burned lime (calcium oxide, CaO)

Feed size: 0-5 mm (after pre-crushing in BB 50; original size: 15 - 40 mm)

Feed quantity: 230 g

Material specification(s): hard brittle

Customer requirement(s): 95 % < 90 µm; 200 - 250 g/sample; 12 samples/day

Subsequent analysis: Particle Size Analysis

Selected instrument(s): Planetary Ball Mill PM 100

Configuration(s): Grinding jar "comfort" zirconium oxide 500 ml; 25 x grinding ball zirconium oxide ø 20 mm

Parameter(s): Revolution speed 500 rpm; reverse mode (2 min. interval)

Time: 4 min. (for fine grinding in PM 100)

Achieved result(s): 99 % < 90 µm

Remark(s): Due to the too large size of the initial CaO chunks for the planetary ball mill, the sample was pre-crushed in a Jaw Crusher BB 50 with gap size 2 mm to particle sizes of about 5 mm (a comparable crusher exists at the customer’s site).

Recommendation: For the fine grinding of brittle hard burned lime the Planetary Ball Mill PM 100 is suitable according to the above mentioned conditions.
Pictures of the sample

**Fig. 1:** Initial hard burned lime sample

**Fig. 2:** Pre-crushed sample from Jaw Crusher BB 50, gap size 2 mm