



HAYER & BOECKER

Smarter Plants for future

Integrated plants for multiple products

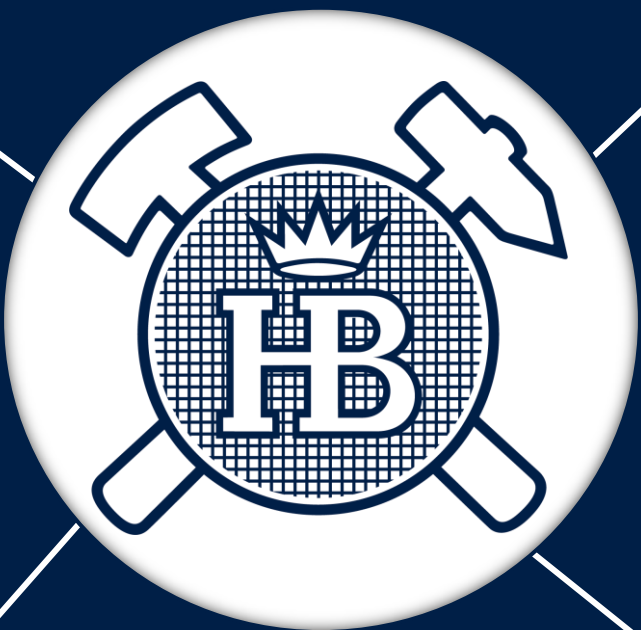
Estonian mining conference 2026, Tallinn

Dr. Hagen Müller

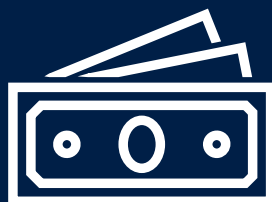
FAMILY-OWNED COMPANY SINCE 1887



Family-owned in 5th Generation



Headquarter: Oelde, Germany
> 50 Subsidiaries globally



598 Mio. € Sales in 2025



> 3.300 Employees Worldwide

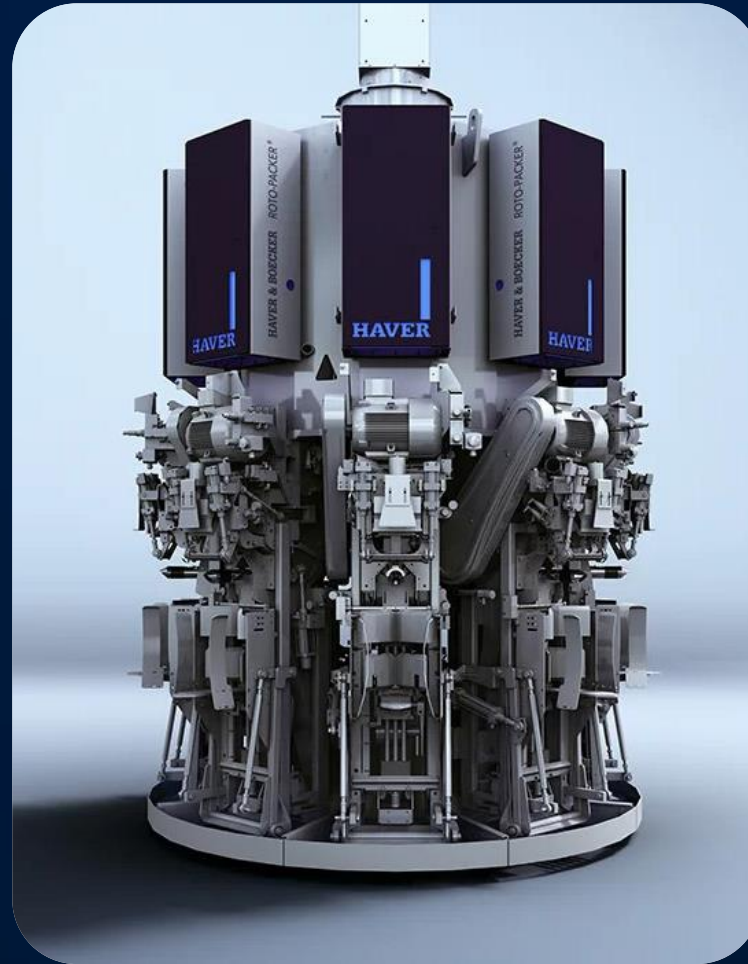


FASCINATING ENGINEERING

HIGH-TECH MESH PRODUCTS AND MACHINERY & PLANT TECHNOLOGIES

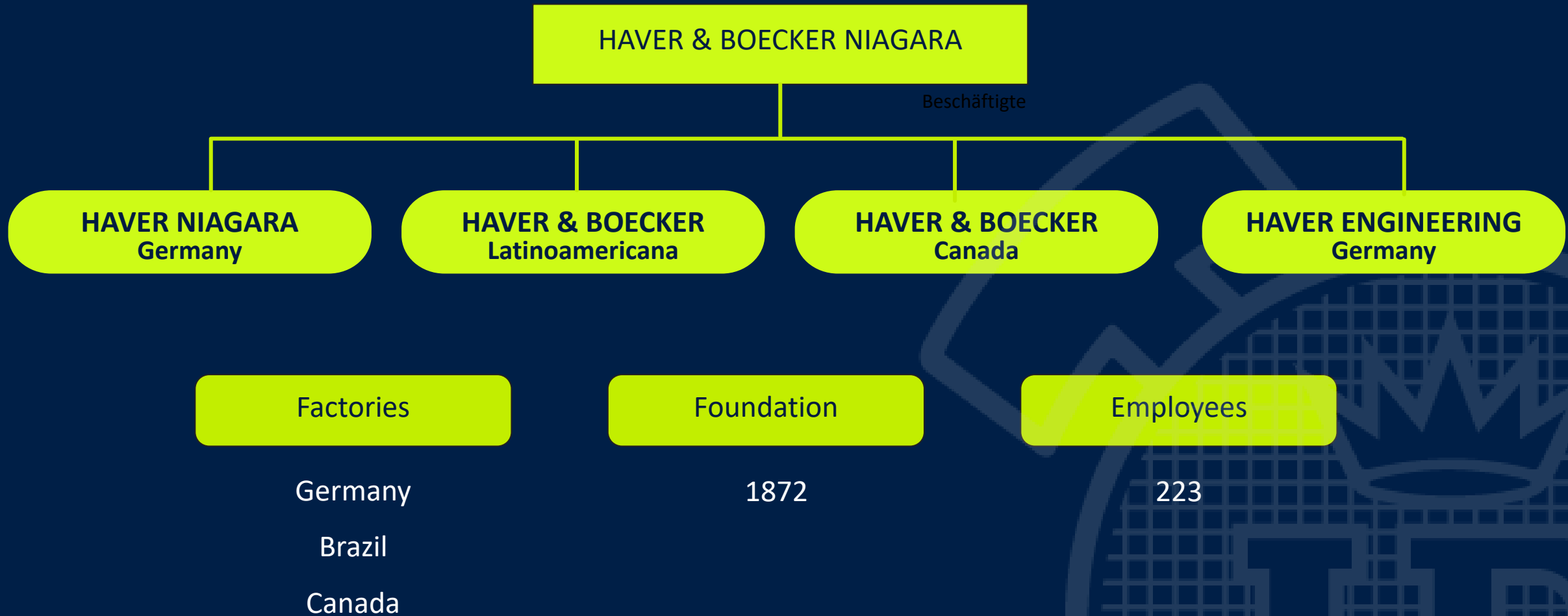


HAYER & BOECKER



FASCINATING ENGINEERING. **AS ONE.**

CORPORATE STRUCTURE



The Niagara Products & Industries



Mining



Aggregates and
Industrial
Minerals



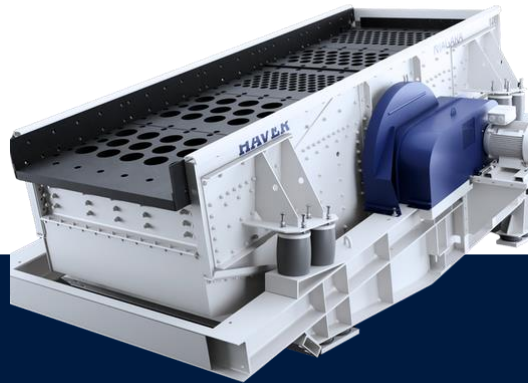
Cement and
Building
Products



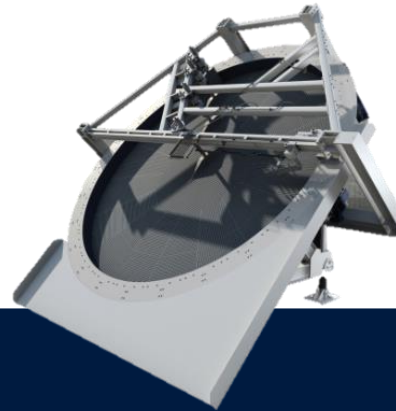
Fertilizer and
Salt



Recycling



SCREENING



PELLETIZING



**ENGINEERING &
PLANTS**

HAVER ENGINEERING GmbH – Associated Institute of Bergakademie Freiberg



PROCESS FEASIBILITY

- Basic research
- Feasibility studies
- Material characterization



PROCESS DESIGN & ENGINEERING

- Process development
- Engineering and consulting



SERVICES

- Process optimization
- Training

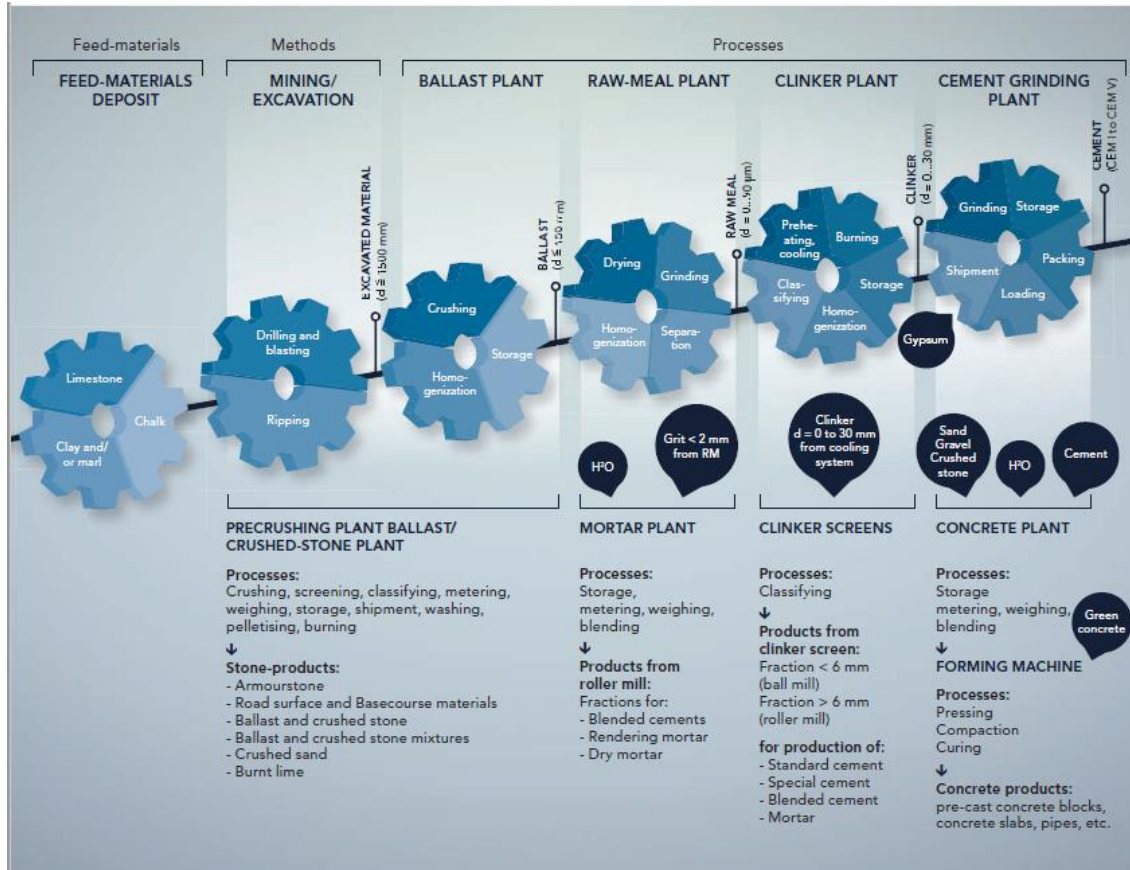
Today's Plants configuration





ONE WAY PROCESS

Process with multiple products



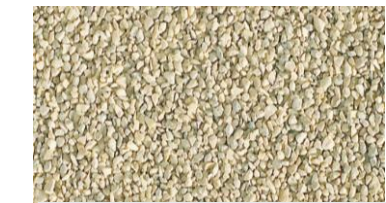
MULTIPLE PRODUCTS



Limestone Aggregates



Mineral Fertilizer Granules



Limestone Grits



Burnt Lime Pebbles



Limestone Mortar Sands



Hydrated Lime Powder



Mining and Processing



Primary crushing plant - Gypsum

Technical details:

Primary crushing and screening plant
HAVER NIAGARA vibrating screen in
eccentric drive shaft design Type
DSS 1400 x 4600 and E 1400 x 4500

Plant capacity: 400 tph

Target product: Lumpy gypsum in grain
size range 35-90 mm



Aggregate washing plant for lime production



HAVER Hydro-Clean washing plant

Capacity: 140 t/h

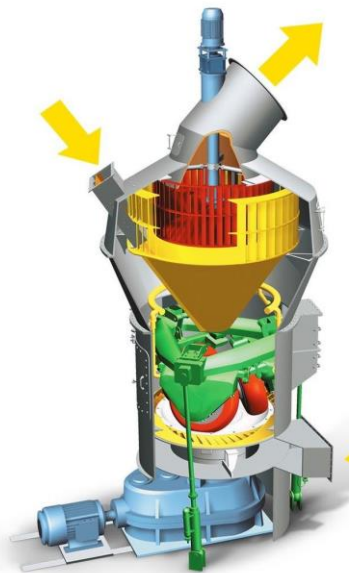


FASCINATING ENGINEERING. AS ONE.

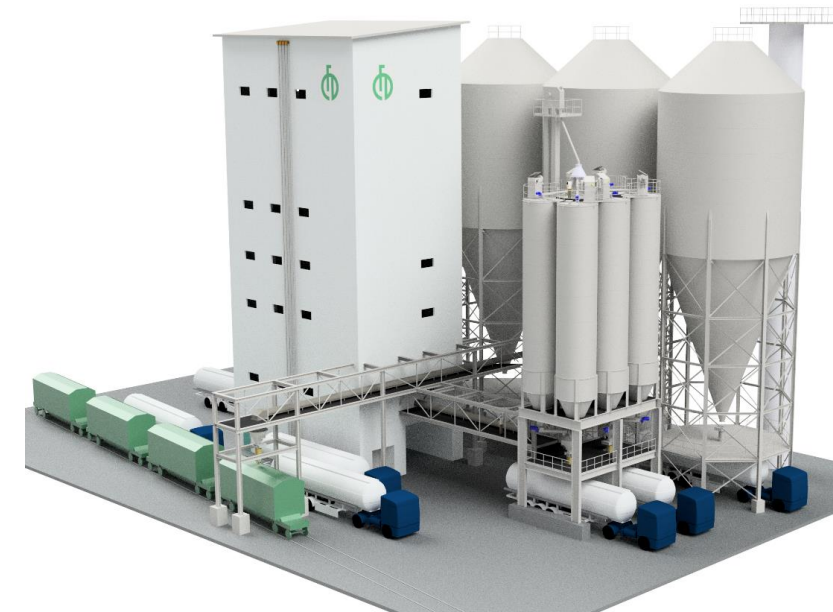
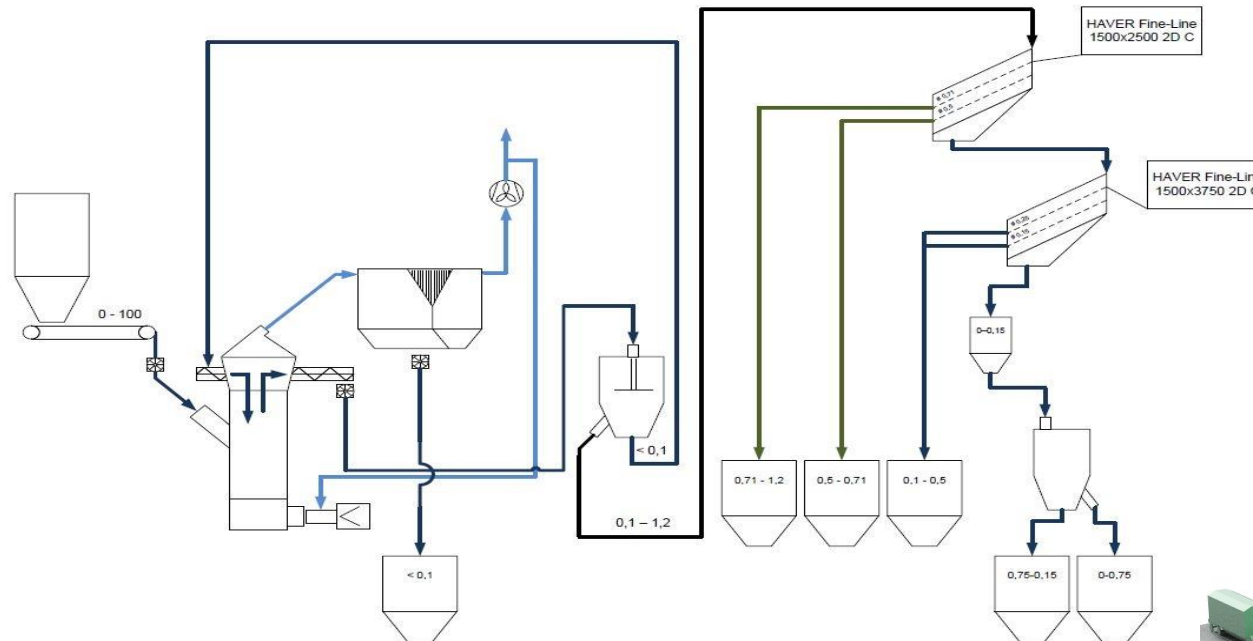
Dry Mortar Plants

Simultaneous production of different fractions in a vertical roller mill:

- Limestone Powder
- Aggregates for dry mortar, mixed cement, plaster



Quelle: Gebr. Pfeiffer



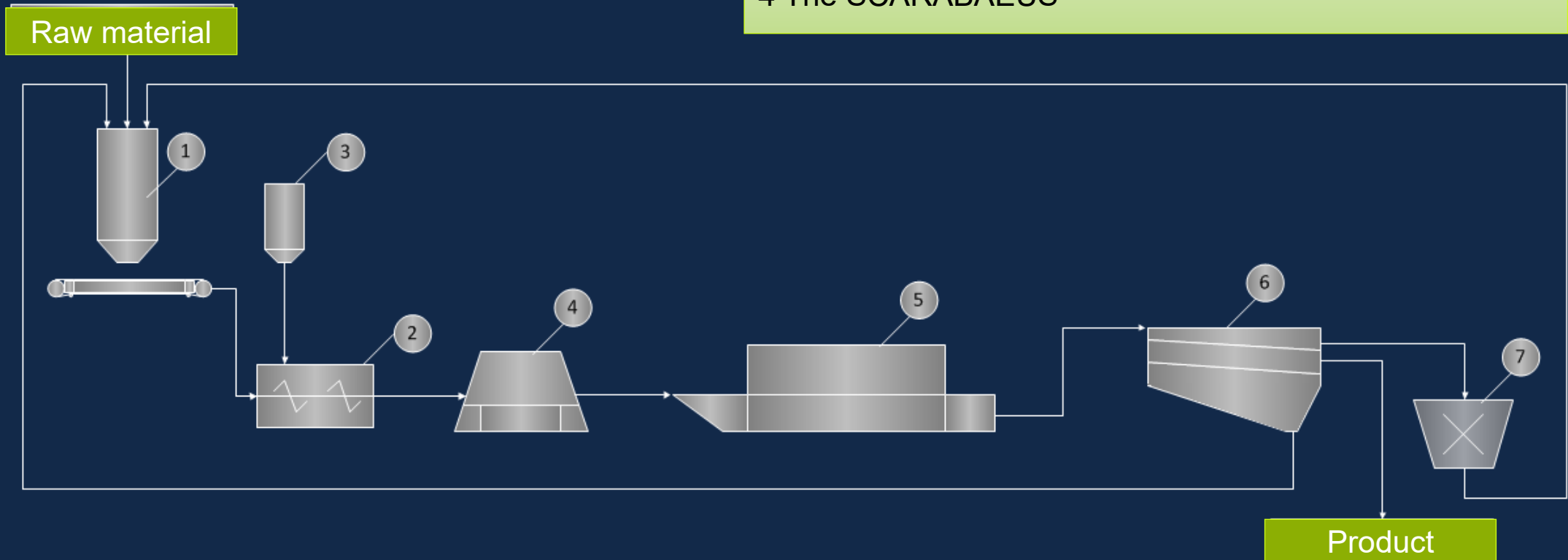


Agglomeration



Agglomeration

- 1 Material bunker
- 2 Mixer
- 3 Binder Stock
- 4 The SCARABAEUS
- 5 Dryer / cooler
- 6 Screening
- 7 Crusher / Recycling



Tailor-made product properties

- Improved storage and transport properties
- Defined particle size and shape
- Production of narrow particle size distribution
- Avoidance of segregation effect
- Adjustment of porosity or density
- Improvement of flowability
- Increased market value

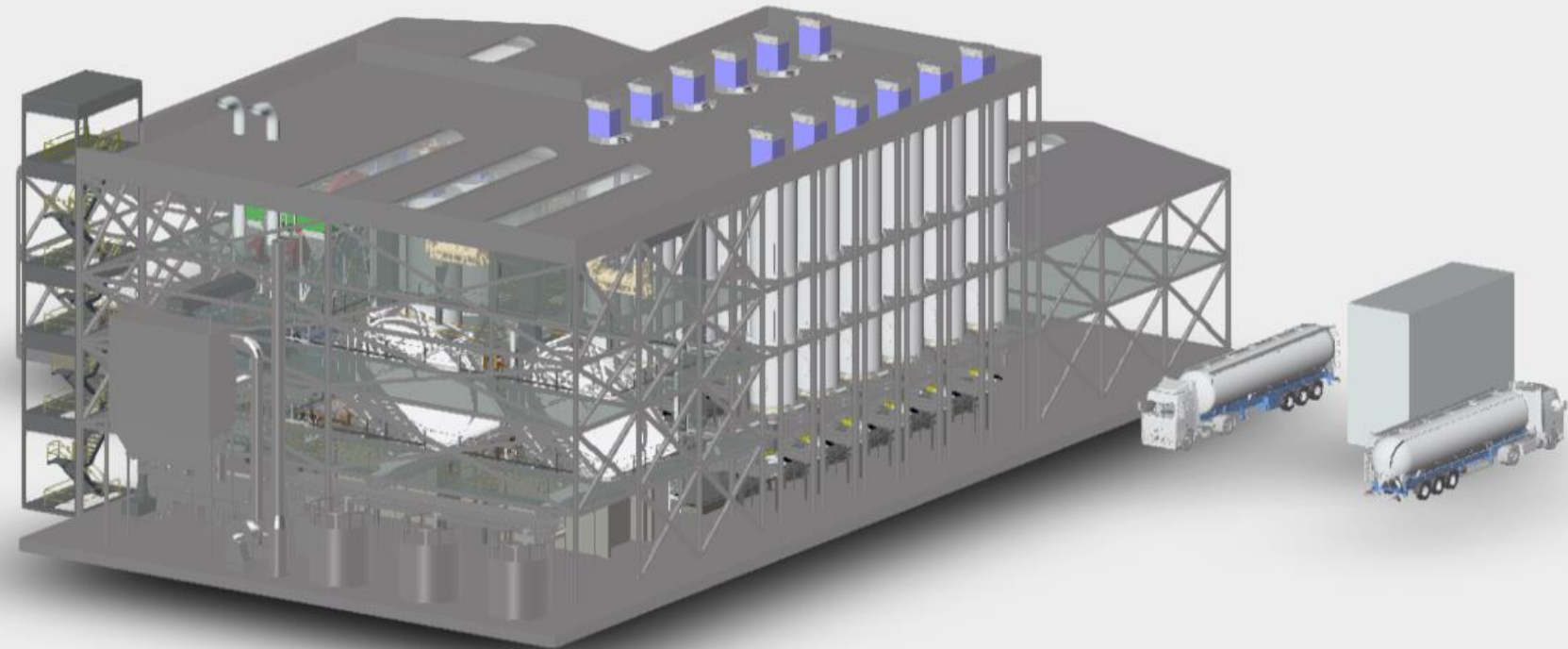


The Scarabaeus® SC4200 for biological-based fertilizer

- Mineral fertilizer is based on limestone powder and selected nutrients
- Limestone powder may be collected from the dedusting plants on the limestone site or from the limestone raw mill
- Mixing, granulating and drying produce uniform spherical fertilizer granules
- Scarabaeus® SC4200 processing limestones into fertilizer in Europe (capacity: 16 t/h)



Agglomeration: Mineral fertilizer plant



Artificial Aggregates from by-products



Material	Bulk density in g/cm ³	Moisture in Ma.-%
Gravel washing mud	1,01 (disaggregated)	18,8
Fine sand 0/1	1,46	10,8

Process description



Homogenization of the input materials

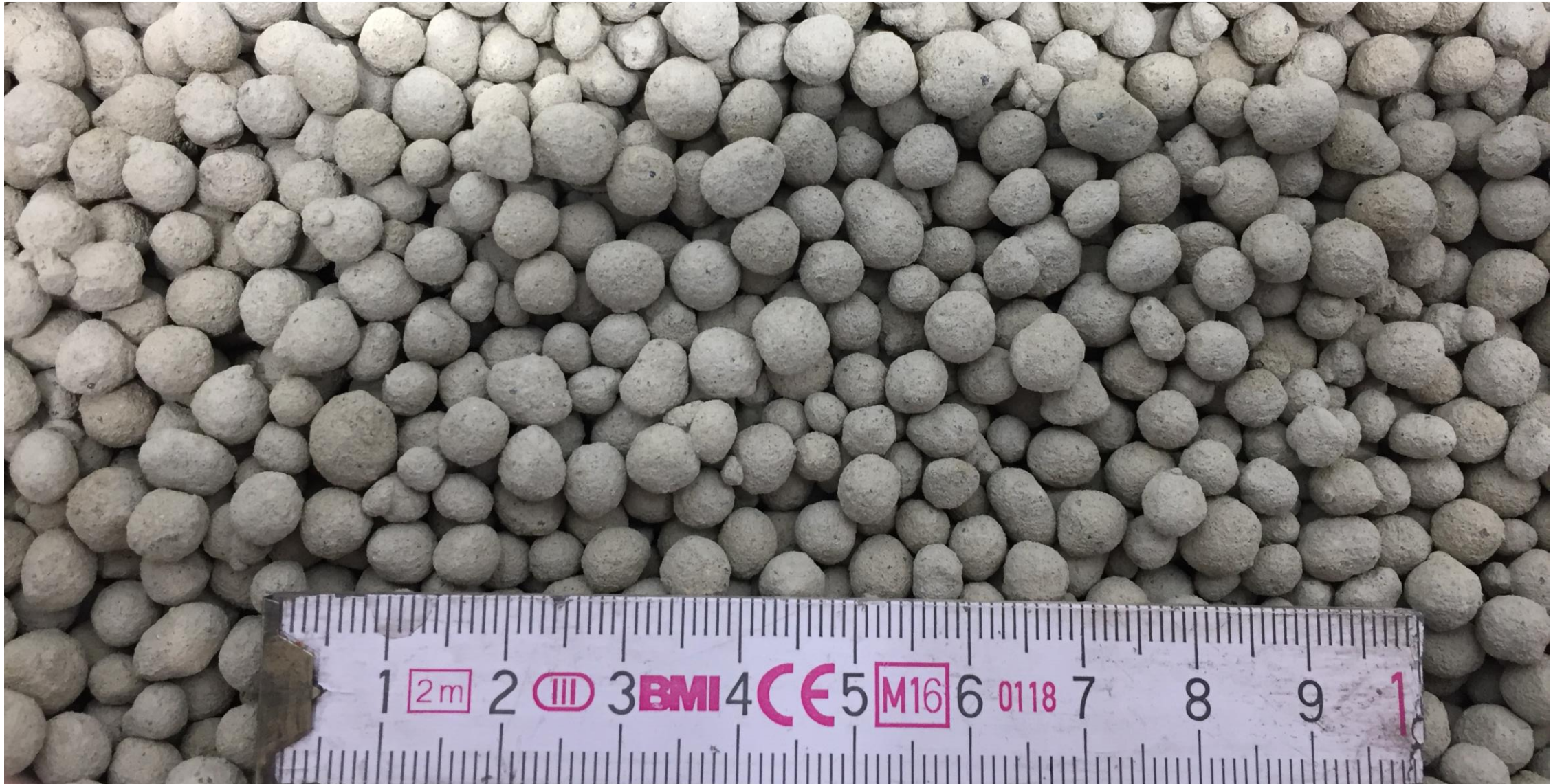
Agglomeration in the pelletizing disc



Pelletizing process



Artificial aggregates



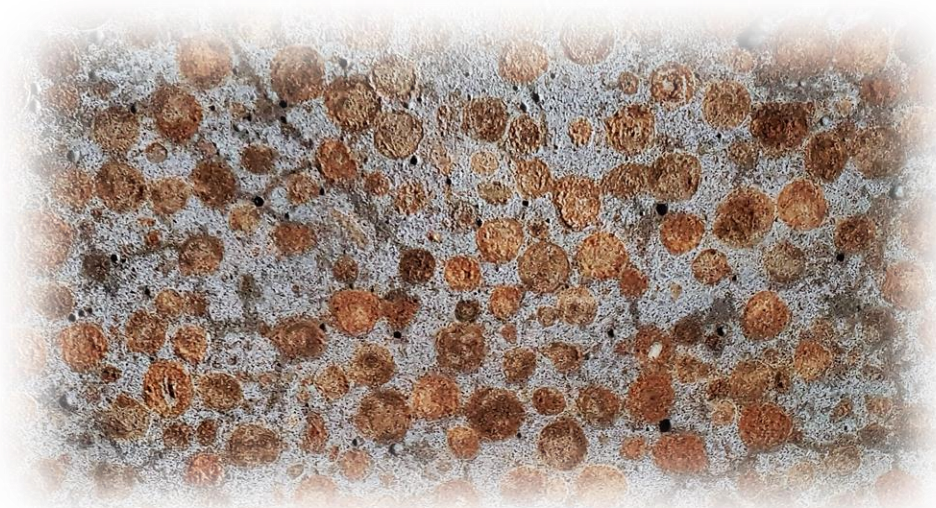
Product properties

Artificial aggregate concrete:

Compressive strength
(at storage temperature: 22 °C):

after 24 hours: more than 40 N/mm²
after 28 days: more than 70 N/mm²

Bulk density: 2.000 ... 2.100 kg/m³



Possible applications:

<https://betonblock.com/en/gallery>



https://www.haller-kreisblatt.de/region/22871513_Deutschlands-erstes-Haus-aus-dem-3D-Drucker-entsteht-in-Westfalen.html

Charcoal granules for CO2 reduced concrete applications



Source: <https://baublatt.at/ir-baut-biomasse-heizwerk-in-rekordzeit/>



HAYER & BOECKER

FASCINATING
ENGINEERING.
AS ONE.