

Machines and Plants for Pelleting of Bulk Products



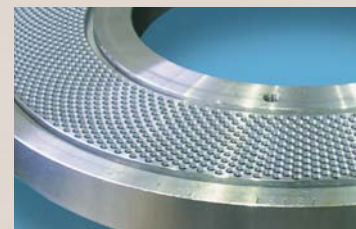
Process Technology for Economic Compacting and Shaping



We constantly encounter bulk products and powdery materials in everyday life. They come in various particle sizes - from lumpy to powdery. Bulk products are processed in many industries, for example in the chemical and pharmaceutical industry, in the disposal and recycling industry, in the field of building materials or in mining as well in the feedstuff and the renewable raw materials industry.

Due to their particle size and their physical properties, the flow properties and handling of bulk products and powdery materials can be very limited. This mainly causes problems during application, storage, transport, conveying, proportioning or during the subsequent process and treatment steps.

The agglomeration by compression or pelleting processes by KAHL offer solutions for the critical product properties described above.



Pelleting with KAHL Flat Die Presses

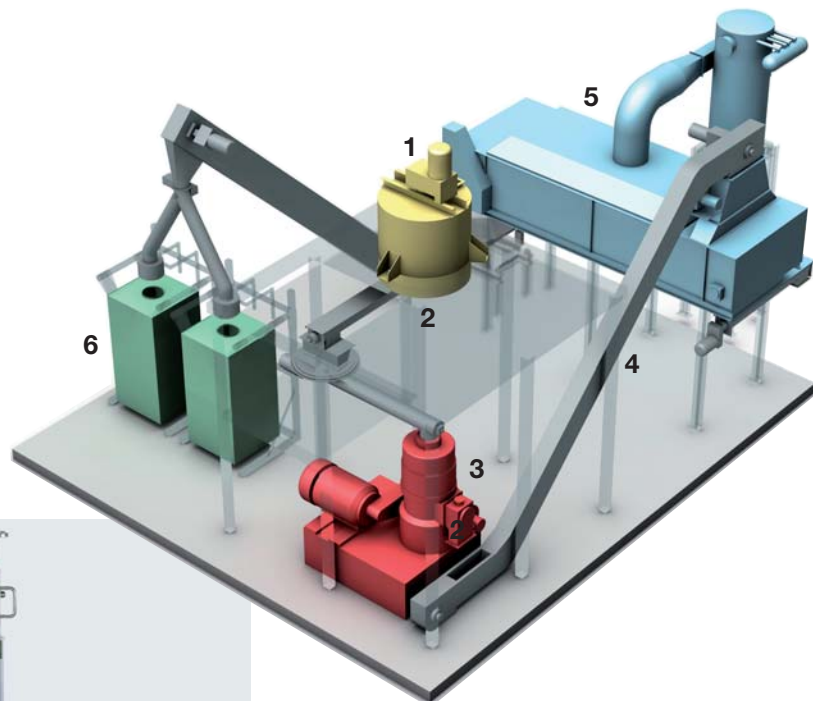
The main parts of flat die press are the die and the pan grinder rollers. They are the actual pelleting elements and responsible for the production of pellets and granulates. The die consists of a circular disk with a roller path provided with effective bores. Shape, arrangement, and length of the effective bores determine the quality of pellets and granulates.

The rotating pan grinder rollers press the product layer on the firmly clamped die into the effective bores. Endless strands are formed in each effective bore which are cut into pellets or granules when they leave the bores.

Reasons for pelleting

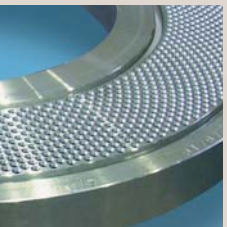
- Lower dust emission
- Lower storage volume due to high bulk density
- Less storage losses
- No segregation
- Good homogenization of mixtures
- Better flow properties
- Better proportioning properties
- Better handling during transport
- Better usability
- Better dissolving properties
- Modification of product structure by means of pressure and heat
- Refinement of finished products
- Higher economic efficiency of production processes

Nowadays, the pelleting and granulation process is used in various industrial production branches.



Example of a plant design for pelleting

1. Buffering of input materials
2. Controllable proportioning and, if required, mixing of components
3. Flat die press for pelleting
4. Discharge of pellets and granulates
5. Drying and cooling as well as exhaust air treatment
6. Packing of pellets and granulates



Examples of Pelletable Materials



- Active earth
- Bentonite
- Biomass
- Blast furnace dust
- Cable waste
- Carboxymethyl-cellulose
- Cardboard waste
- Catalysts
- Chalk
- Charcoal meal
- Carpet waste
- Cellulose dust
- Clay
- Coal dust
- Coffee waste
- Compound feed
- Compost
- Cotton waste
- Diaper waste
- Domestic waste
- FGD gypsum
- Filter cake
- Filter dust
- Flax
- Fleece waste
- Flue ash
- Industrial waste
- Instant products
- Kaolin
- Labels
- Lacquer residues
- Lime
- Metal salts
- Olive pulp
- Paper sludge
- Paper waste
- Peat
- Petfood
- Petroleum coke
- Plant extracts
- Plastic waste
- Polymer additives
- Pomace
- Premixes for tablets
- Rock wool waste
- Saw mill waste
- Sewage sludge
- Sisal waste
- Soot
- Stabilisers
- Sugar beet pulp
- Sulphur pulp
- Talc
- Textile waste
- Torrefied biomass
- Vulcanization accelerators
- Waste tyres
- Wood and many more...

Product Questionnaire Pelleting Press

The questionnaire helps evaluating the product to be processed and to prepare the pelleting and granulation tests in the pilot plant.

Raw materials

- Product designation and composition
- Product shape, bulk density, water content
- Softening and melting temperature, ignition temperature

Particularities to be observed when handling the raw materials

- Storage and disposal regulations, safety data sheet
- Addition of water or additives
- Max. processing temperature

Test aim and task

- Pellet diameter and length
- Requirements on the final product (e.g. final moisture content, final bulk density, stability of the pellets, etc.)

Intended use of the pellets

- Requested capacity and design of the plant

The complete questionnaire can be conveniently filled in online. It can be found under www.akahl.de.



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