

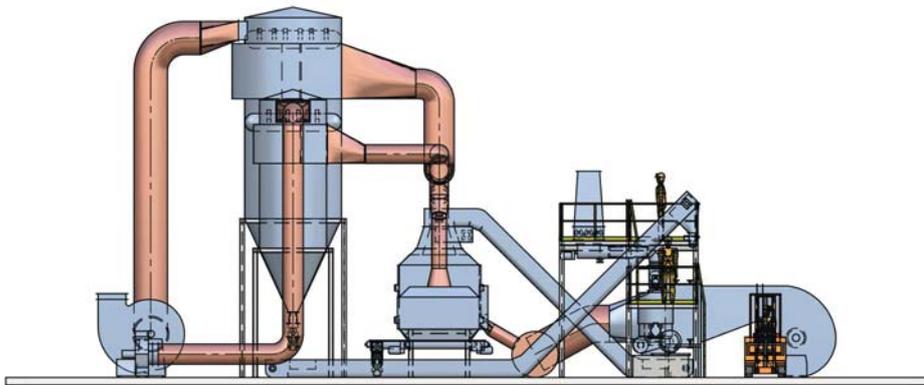
KAHL Pelleting Presses in the Steel and Coal Industries



KAHL Pelleting Presses for Specific Agglomeration of Fines from Coal, Coke, Iron Ore and Filter Dusts

For decades, AMANDUS KAHL has produced pelleting plants for lumpy and powdery products from various industries. We are among the market leaders in the field of the production of pellets and soft pellets from coal-like products.

Our know-how gained in more than 130 years is not limited to the mere pelleting press, but also includes product proportioning systems, the required conveying, cooling and drying systems as well control systems.



Particularities of pelleting coal-like products

For coal-like products, such as coke dust, the so-called "wet pelleting" is normally applied. The product having a water content of about 20 to 25 % is mixed with a binder and then pelleted. The final pellet strength is reached by means of the downstream drying process. For this reason, gentle drying with Kahl belt driers is ideal.

Most coal-like products are abrasive and can cause premature wear of the pelleting tools. The KAHL flat die pelleting presses are especially equipped for these requirements.

Particularly high steels grades and hardening processes for the pelleting tools, special linings and devices in modular design minimise the wear. Thus, abrasive materials can be economically processed.

The following special adaptations have been successfully implemented for our customers:

- Dies and pan grinder rollers made of special steel grades
- Roller covers made of specially alloyed steels
- Wear-resistant lining of the press interior
- Discharge and breaking-off device in modular design



From Waste to a Valuable Material – Economic Pelleting of Coal-like Products

Coke breeze

Organic materials with a very high carbon content, such as coke and graphite, tend to generate a lot of dust, so that their production or transport already implicates a high dust formation. The value of these materials is high, but in dusty form they cannot be used optimally in further processes. By means of pelleting, these dusts are agglomerated into larger, uniform pieces which can be processed easily. An example is the use as reductant in blast furnaces.

Dusts from the mining industry

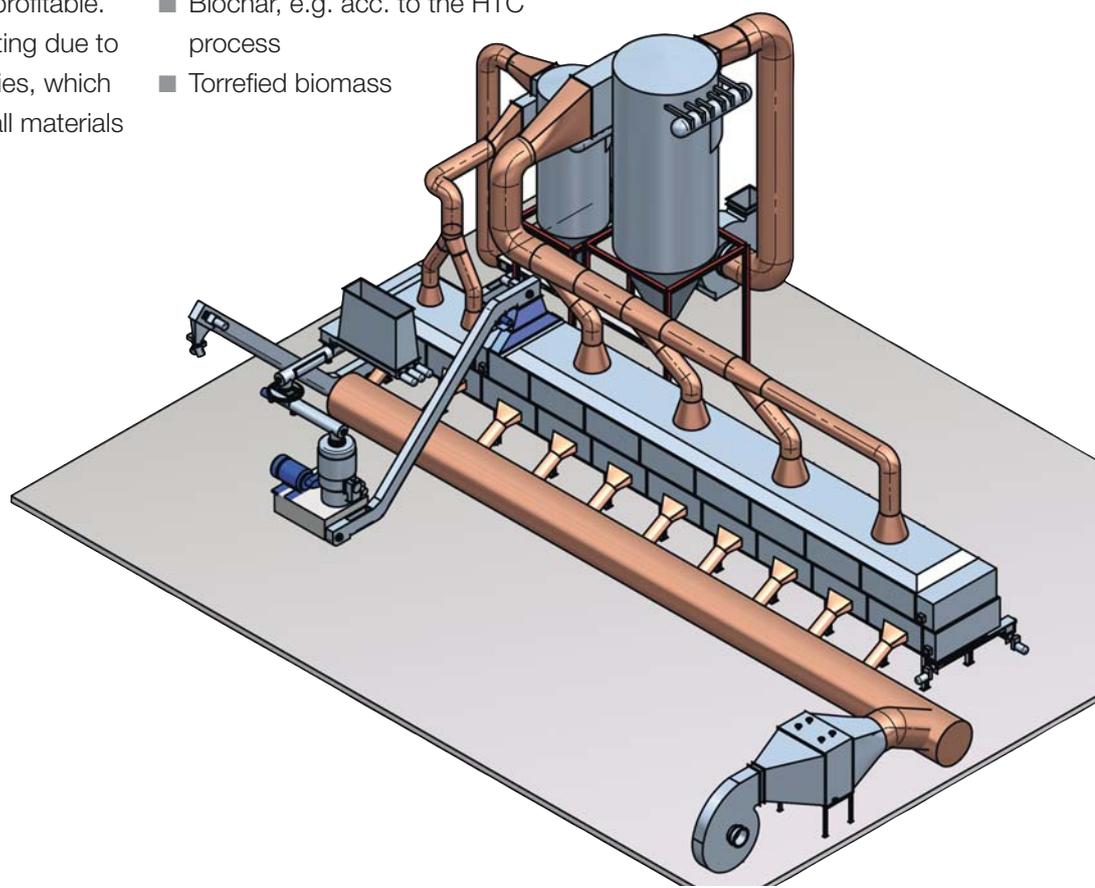
During the extraction of lignite and hard coal a lot of dust is produced, which has been processed with KAHL pelleting presses into pellets for many years already. The positive properties of the pellets, such as stability during transport, high bulk density, low dust formation etc., at minimum costs for pelleting make the investment in a Kahl pelleting plant quickly profitable. Lignite is particularly interesting due to its excellent binding properties, which makes a combination with all materials possible.

Activated carbon

Also coal-related raw materials have been processed successfully with Kahl pelleting plants for years to benefit from the advantages of pellets. Activated carbon, for example, is a coveted absorber to separate liquids and gases from foreign substances. It is important that the activated carbon can be flown through in an optimum way. In powdery state, the fluid cannot flow through the layer of activated carbon. So it must consist of coarser pieces which are as homogeneous as possible. Pellets are ideal, as they also have the necessary stability.

Further coal-like products which our customers successfully pellet with the KAHL flat die pelleting presses:

- Peat
- Xylite
- Acetylene black
- Petroleum coke
- Charcoal
- Biochar, e.g. acc. to the HTC process
- Torrefied biomass



Applications / Product Examples



Activated charcoal and molasses



Anthracite coal 4 mm



Lignite



Peat



Graphite



Coal



Petroleum coke



Calcined soot

Testing Facilities / Pilot Plant

Our test departments are responsible for the development of new processes and machines. They are provided with extensive pilot plants with laboratory, production machines, and measuring equipment for the most important process stages of the conditioning technology.

The plants are available to prospective buyers and customers who want to have their own products tested. On the basis of the results achieved plant designs and offers can be prepared.



KAHL Pilot plant with proportioning unit, continuous mixer, hydrothermal reactor, annular gap expander, extruder OEE, flat die pelleting press, belt drier/cooler, Rotospray, crumbler.

Coal-like products which are pelleted with the KAHL flat-die pelleting presses:

- Coke breeze
- Dust from the mining industry
- Activated carbon



AMANDUS KAHL GmbH & Co. KG

Dieselstrasse 5-9

D-21465 Reinbek / Hamburg

Phone: +49 (0)40 727 71 - 0

Fax: +49 (0)40 727 71 - 100

info@amandus-kahl-group.de

www.akahl.de