

Recycling of municipal and industrial waste

KAHL plants for the production of fluff and pellets as alternative fuels



Compaction for the production of ecologically valuable alternative fuels



Today, many recycling plants use KAHL flat-die pelleting presses for processing municipal waste, commercial refuse, separated mixed plastics with a high caloric value and the light fraction into alternative fuels in the form of pellets or fluff.

Within the scope of TASI (Technical Instruction for Settlement Waste) implementation the disposal of untreated waste at German waste disposal sites ended on May 31st, 2005. In the meantime recovery plants have been built which mainly serve for separation of the recoverable materials from waste.

It turned out that it is ecologically and economically reasonable to produce a defined fuel from certain materials.

One possibility of waste recovery is the production of alternative fuels, which serves as a lasting conservation of the resources of fossil fuels.

The use of municipal waste as an alternative fuel illustrates the wide range of possible applications.

Seven million tons of municipal waste can be processed into about three million tons of alternative fuels with a caloric value of abt. 17,500 KJ/kg, which can be used as an important energy source in the following sectors:

- Steel industry
- Power stations
- Production of the synthesis gas methanol
- Cement industry



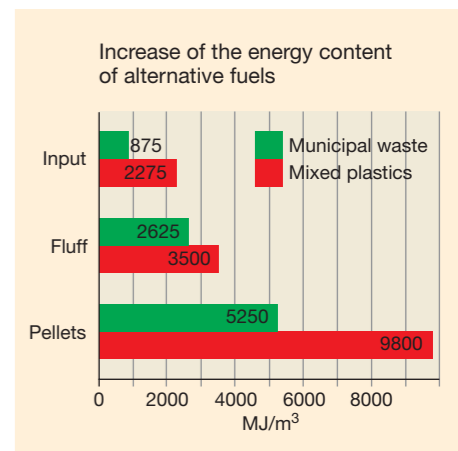
Pelleting presses in a pelleting plant for domestic waste

This processed material is used as fuel both in loose form, also called "fluff", and in compacted form as pellets.

Depending on the needs of the ultimate buyer, the alternative fuels requested by the customer can be produced with the KAHL plants.

Fluff and pellets can be produced in the same pelleting plant. By using different pelleting tools (dies and pan grinder rollers) in Kahl plants, the user is able to process waste of different origins, such as

- municipal waste and light fraction
- mixed plastics separated from the light fraction
- the shredder light fraction from car recycling
- the reject of the paper industry



In our plants, small quantities of other substances, such as

- ground wood
- coal dust
- fabric remnants
- molasses (liquid by-product of the sugar industry)
- ◆ oils

can also be added to the already-mentioned alternative fuels.

Our pelleting presses are the centre of a plant for the production of alternative fuels.

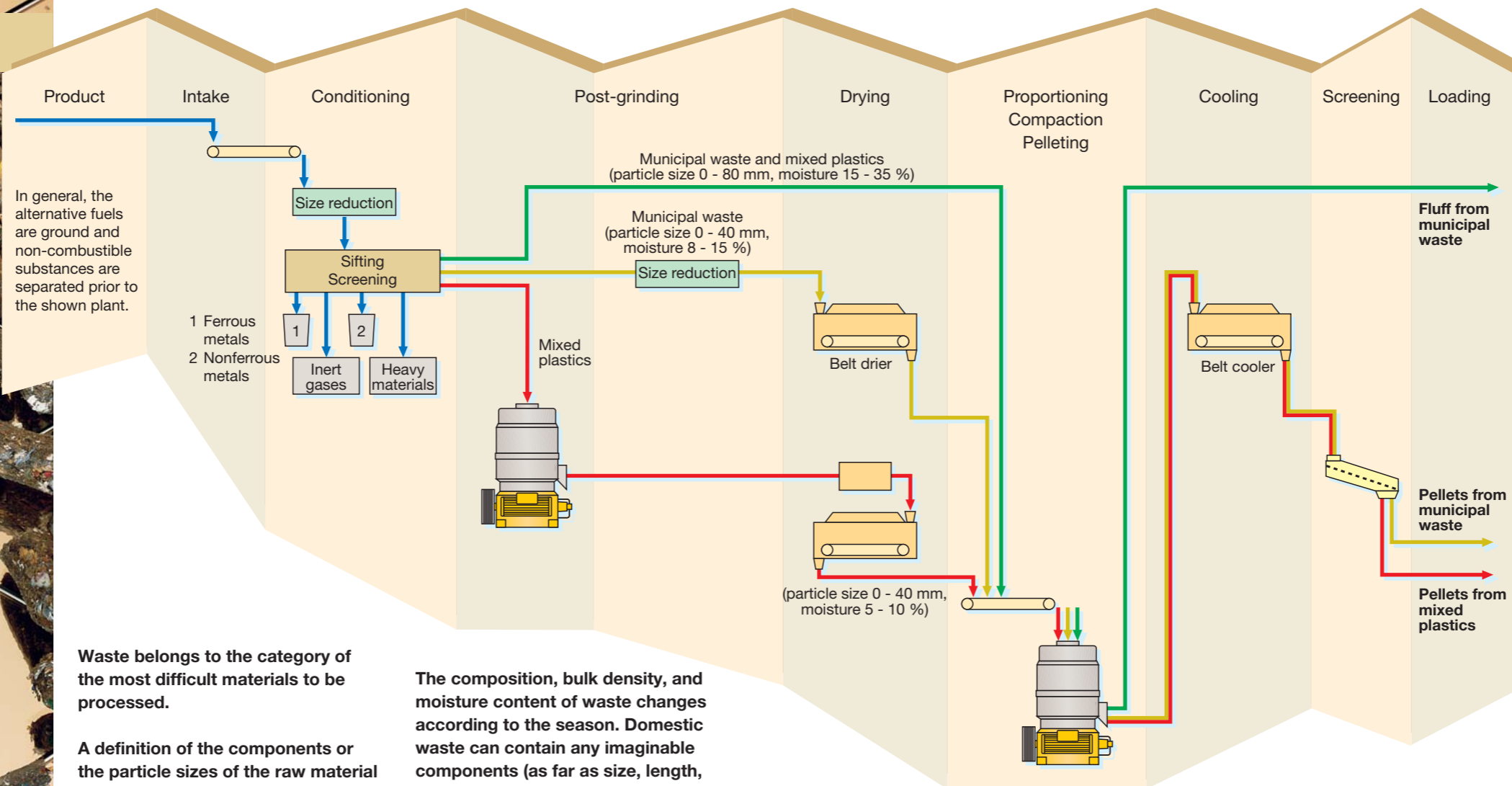
We divide the plants for the production of alternative fuels into 3 groups:

1. Fluff plants (photos see overleaf)
2. Pelleting plants
3. Fluff and pelleting plants

They consist of the following main process stages:

- Supply
- Production of fluff
- Supply
- Mixing
- Production of pellets
- Screening
- Proportioning
- Discharge
- Drying
- Proportioning
- Cooling
- Discharge

**FLUFF
PELLETS**



In general, the alternative fuels are ground and non-combustible substances are separated prior to the shown plant.

Waste belongs to the category of the most difficult materials to be processed.

A definition of the components or the particle sizes of the raw material is hardly possible.

The composition, bulk density, and moisture content of waste changes according to the season. Domestic waste can contain any imaginable components (as far as size, length, and type are concerned).

KAHL machines and plants for the production of alternative fuels

Kahl machines are used for the compaction of by-products from plants for mechanical/biological waste treatment and in mechanical waste treatment plants themselves. The conditioned residual waste is sold in the form of pellets or fluff.

- The biggest buyers of pellets are the operators of gasification plants and power stations.

- Fluff is mainly used as alternative fuel to oil or coal dust in the cement industry and in power stations.

Our services:

Consultation, assistance in obtaining approval, engineering, commissioning, installation, and after-sales service.

Further application possibilities of KAHL plants for recycling industries

- Grinding and separation of the components from waste tyres (granulate)
- Wood (saw dust, shavings, sander dust)
- Municipal sewage sludge
- Agricultural biomass (compost, fertilizer)



Fluff storage



Feeder to the pelleting press



Pelleting press for the production of fluff



KAHL cooler



Pelleting press



Pellets from mixed plastics



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