

TK-500 - Technology

General description



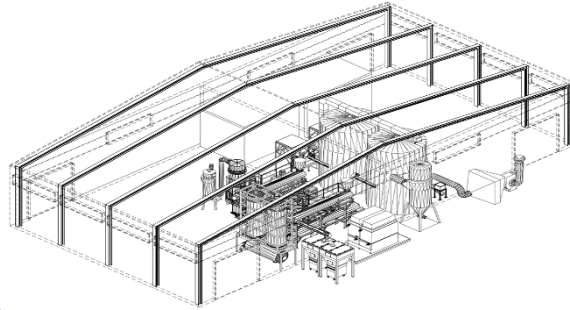
Ingenieurbüro A S
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Overview

Input

- > Mixed plastics
- > Used tires / rubber
- > Biomass
- > Composites

Thermo-Catalysis- Process



Energy efficiency till 85%

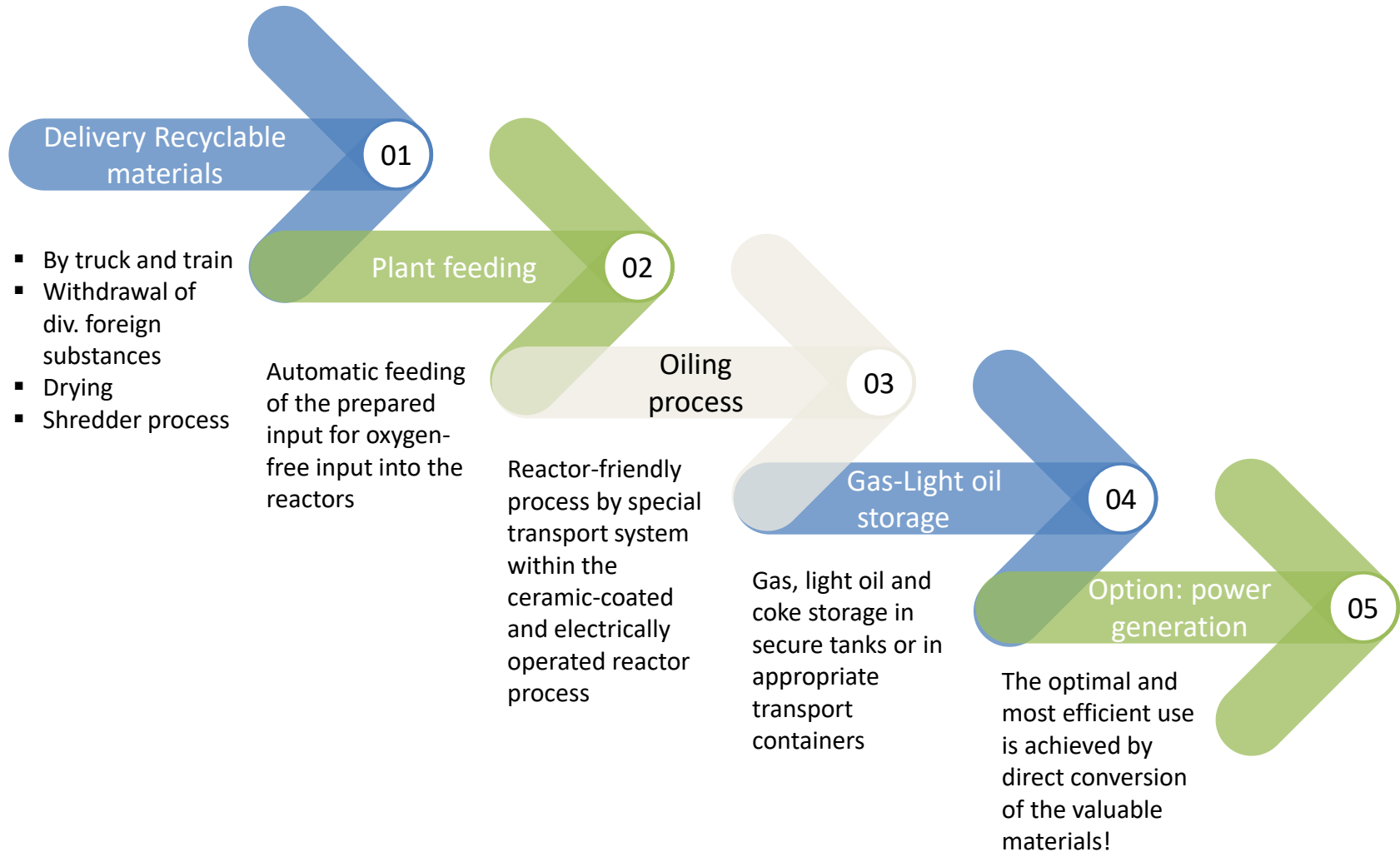
- > light oil
- > gas
- > Coke / carbon

-
- > Option: Power generation with generated light oil

Output



Procedure



Process

Cracking occurs at low temperatures up to 480 ° Celsius

Capacity from 4,500 t / year and double reactor, modular increase

Feeding of zeolytic and corresponding catalysts (cost: 1-2 € cents / liter light oil)

The process takes place in the reactor oxygen u. safe with low negative pressure

Continuous mutual maintenance of the plant reactors during operation

Very energy-efficient and emission-free production of electricity

Thermo-Catalysis-Process



Benefits

Material flow

TK-500 recycles wide, unsorted and also impure material flows

The waste streams are processed to marketable products or for electrification, such as gas, light oil, coke, coal

The system can be diversified to multiple waste streams

Fully electronically controlled and monitored process

Technology

The technology was developed and commercialized by scientists in collaboration with 3 universities

Future scientific support will be ensured

Profitability

The TK-500 system works in 3-shift operation (24/7)

Modular performance enhancement with increasing material flow quantities

Rising capacity reduces payback time

Option

Optimal power generation option via gas and light oil with dual-fuel generators!

Provides independent operating power and also network supply.



Potential

Example

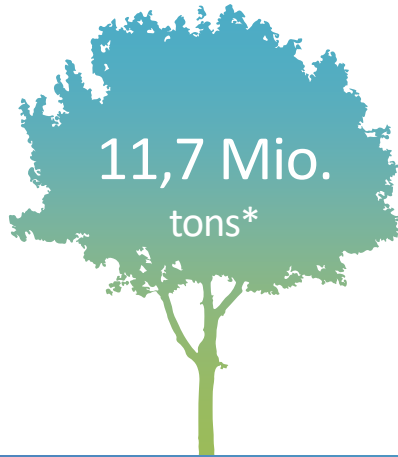
Plastic consumption / plastic production

0,0045 Mio.
tons



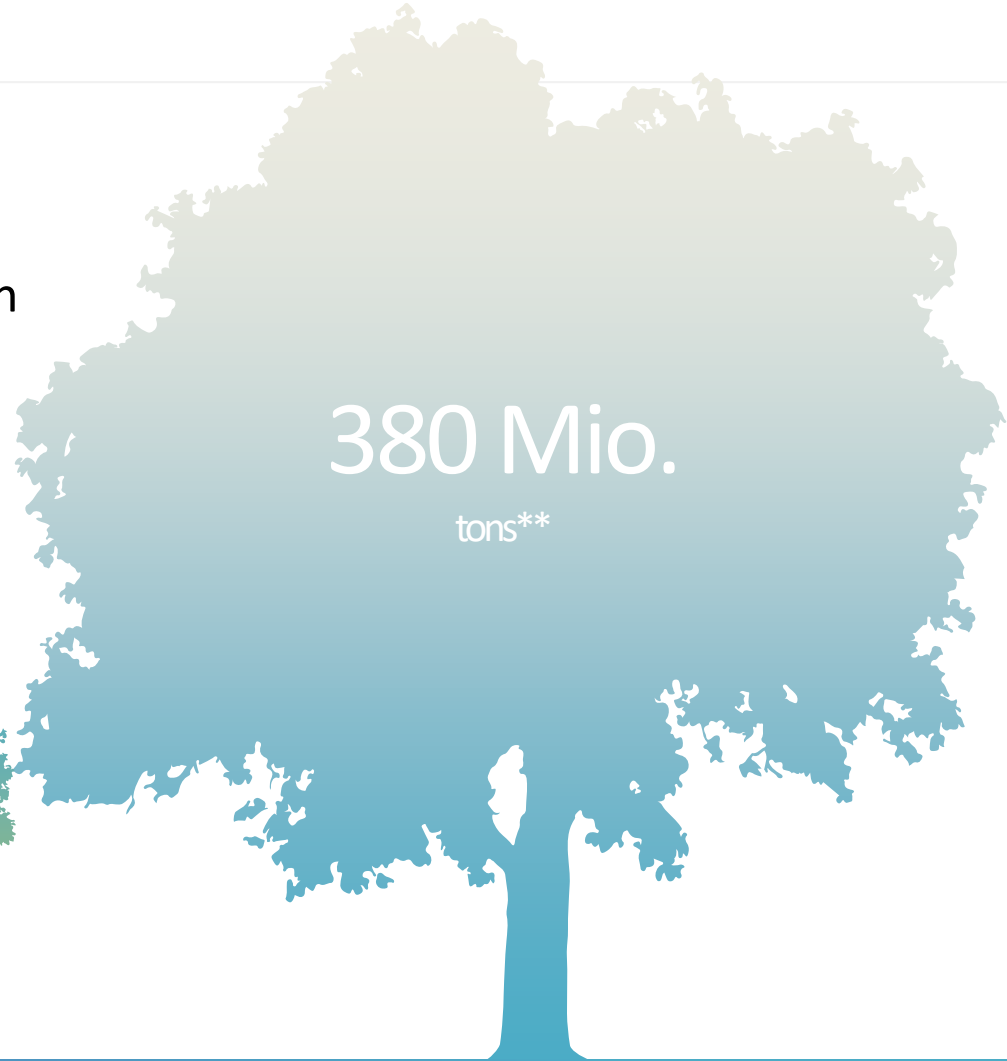
Capacity basic-TK-500
plant

11,7 Mio.
tons*



Plastic waste in Germany
per year

380 Mio.
tons**



Plastic waste in the world
per year



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*Plastic garbage statistics 2016
** spiegel online / Production 2015

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