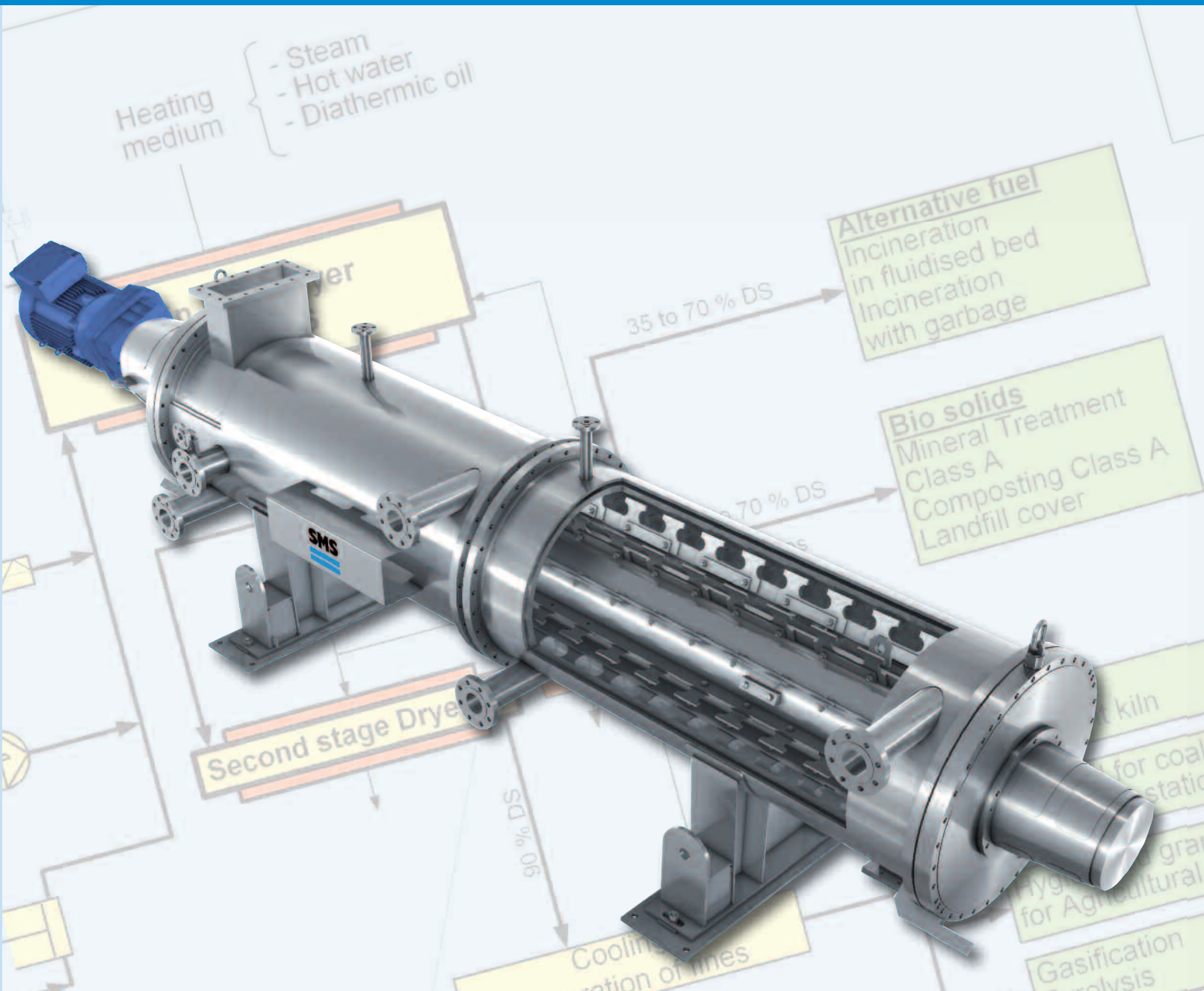


## Drying Technology for Sewage Sludge



## Horizontal Thin Film Dryer

**Buss-SMS-Canzler drying technology, and in particular the Horizontal Thin Film Dryer has been supplied and successfully operated in the field of sludge drying for more than 25 years. This technology has been well proven in a large number of drying plants, and we have supplied plants with throughputs of up to 800 wet tons per day.**

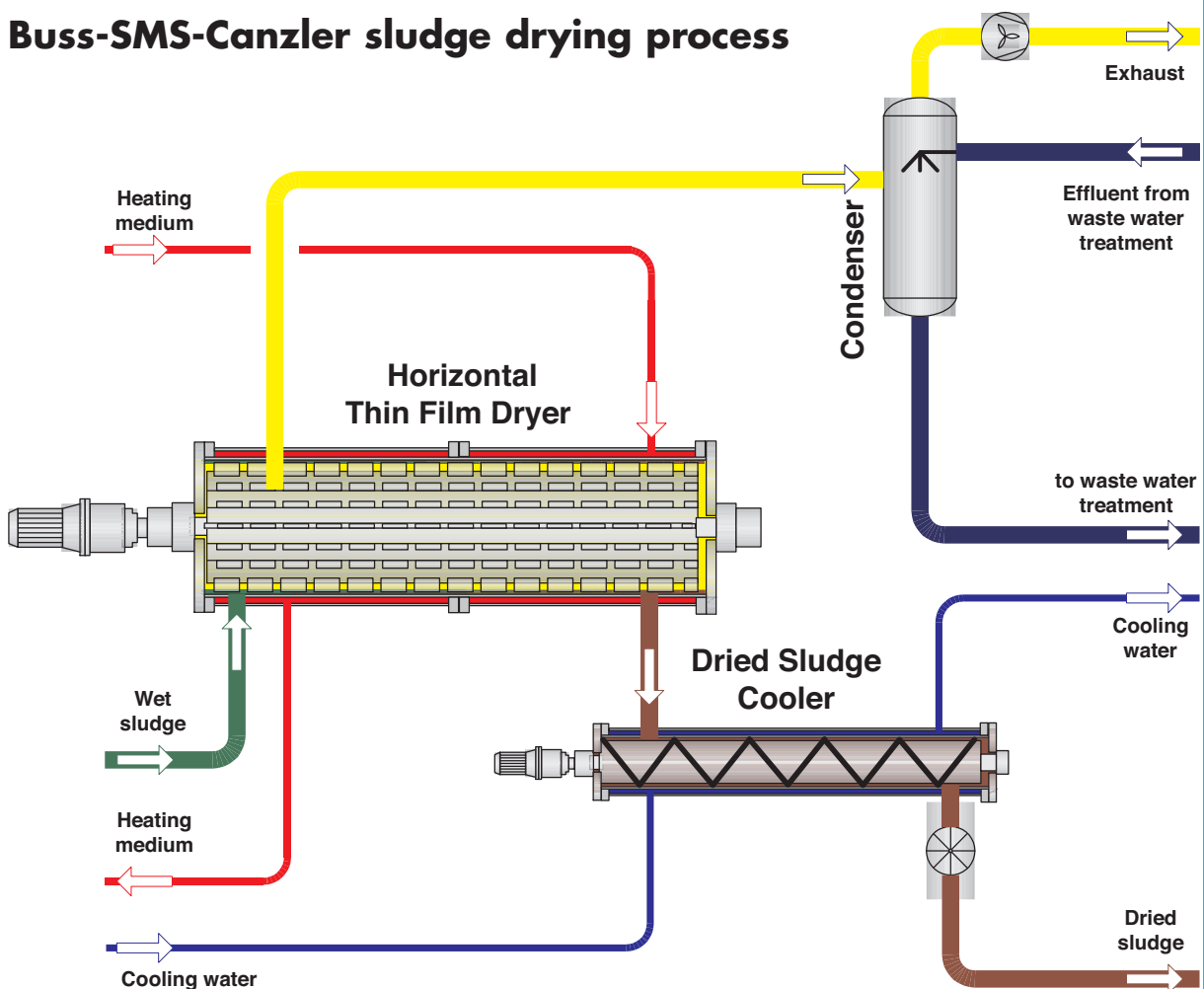
### Horizontal Thin Film Dryer

Horizontal Thin Film Dryers are continuously operating contact dryers. The dryer vessel consists of a cylindrical shell and end covers, the vessel is provided with an external heating jacket. Internally an agitator is provided with demountable blades bolted to the agitator. The agitator is supported at both ends by external bearings. The drive system is externally mounted.

The agitator blades maintain a thin layer of product on the heated walls, and convey the product along the heated vessel walls to the discharge nozzle.

Vapours pass counter currently to the product flow, and are discharged through a vapour nozzle adjacent to product feed nozzle.

### Buss-SMS-Canzler sludge drying process



# Buss-SMS-Canzler Sludge Drying Process

**PRE - DRYING**

The Thin Film Dryer offers an ideal solution for drying of municipal and industrial sludges to intermediate or high dry solid levels. The Buss-SMS-Canzler Thin Film Dryer can provide a fully dried product in various forms, suitable for the final purpose either in a single stage or in combination with a segmented disc dryer type Linear Dryer or Rovactor®.

**Dry solid  
content of 35 - 50%**

• **Solid fuel for  
fluidised bed incinerators**

**Dry solid  
content of 50 - 70%**

- **for combined incineration  
with garbage**
- **biosolids to mineral treatment,  
composting or landfill**



*1-stage drying*



Specialist in thermal separation  
and membrane technology

**SMS**

Buss-SMS-Canzler

**FULL  
DRYING**  
85 to 95%  
dry solid

### Thermal utilisation

- As solid fuel for cement kilns or for coal fired power stations
- For pyrolysis, gasification or other conversion processes

### 2-stage drying system - full drying

The Linear Dryer is a perfect solution for drying the pre-dried granules from the Thin Film Dryer up to 90% dry solids. The Linear Dryer is a heated U-type conveyor with a slow moving, heated shaft with specially designed transport scoops. The slow rotation of the impeller in combination with a relatively low filling height ensures gentle movement and transportation of the granules.

### Biosolids

"Class A" granules  
for agricultural use,  
for composting  
and for soil reclamation

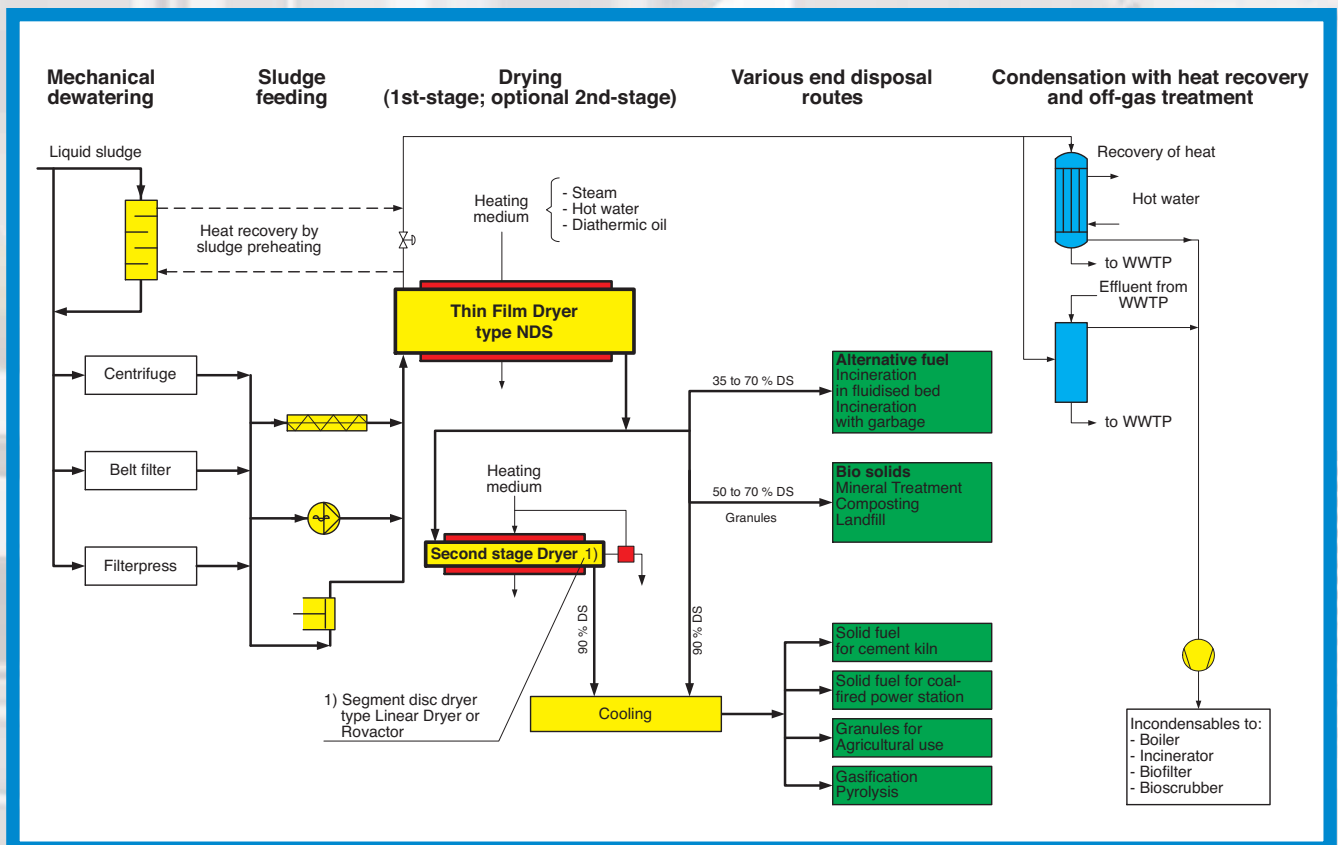


2-stage drying

Thin Film Dryer



The following graph gives an overview of the customized Buss-SMS-Canzler sludge drying systems and how they can be integrated in the overall biosolid disposal process.



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and membrane technology

# SMS

Buss-SMS-Canzler

# Advantages of Buss-SMS-Canzler Sludge Drying Technology

## Simple

- single pass operation over the sticky or pasty phase; hence no back mixing of dried product
- contact drying without using sweeping air /gas
- no special preconditioning of the wet sludge

## Economical

- minimum energy consumption
- integrated heat recovery (optional)
- self cleaning heat exchange surface
- short start-up and shut down time
- low maintenance costs
- minimum supervision

## Flexible

- applicable to all types of sludges
- suitable for any initial dry solid content
- any final dry solid content
- different heating media
- single stage or two stage operation

## Ecological and Safe

- enclosed system under slight negative pressure
- self inertisation by the evaporated water

## References

- more than 80 sludge drying installations
- references worldwide (Europe, USA, China, Arabia ...)
- dryers in operation for more than 20 years