

Mono-incineration of sewage sludge with patented impulse burner

The most economical and ecological
sewage sludge recycling method



Benefits at a glance

- + Flexible system size scalability
- + Energy self-sufficient drying process
- + High-quality workmanship, low operating costs
- + Low space requirements
- + Very high system availability
- + Fully automated operation
- + Turnkey plant construction with cost certainty
- + Own research facility for continuous further development
- + Production of high-grade sewage sludge ash that is high in phosphates e.g. for use as fertiliser

Services offered by Carbotechnik

- + Appraisal
- + Individual planning and layout of the system and plant components
- + Planning reliability with turnkey delivery and commissioning
- + Professional project management
- + Operational support and remote maintenance including after-sales service

Mono-incineration

Our concept ensures the most economical recycling of sewage sludge.

The sewage sludge is supplied from a storage bunker for drying and then pulverised.

Drying maximises the heating value of the sewage sludge and prepares the material for **optimal combustion**.

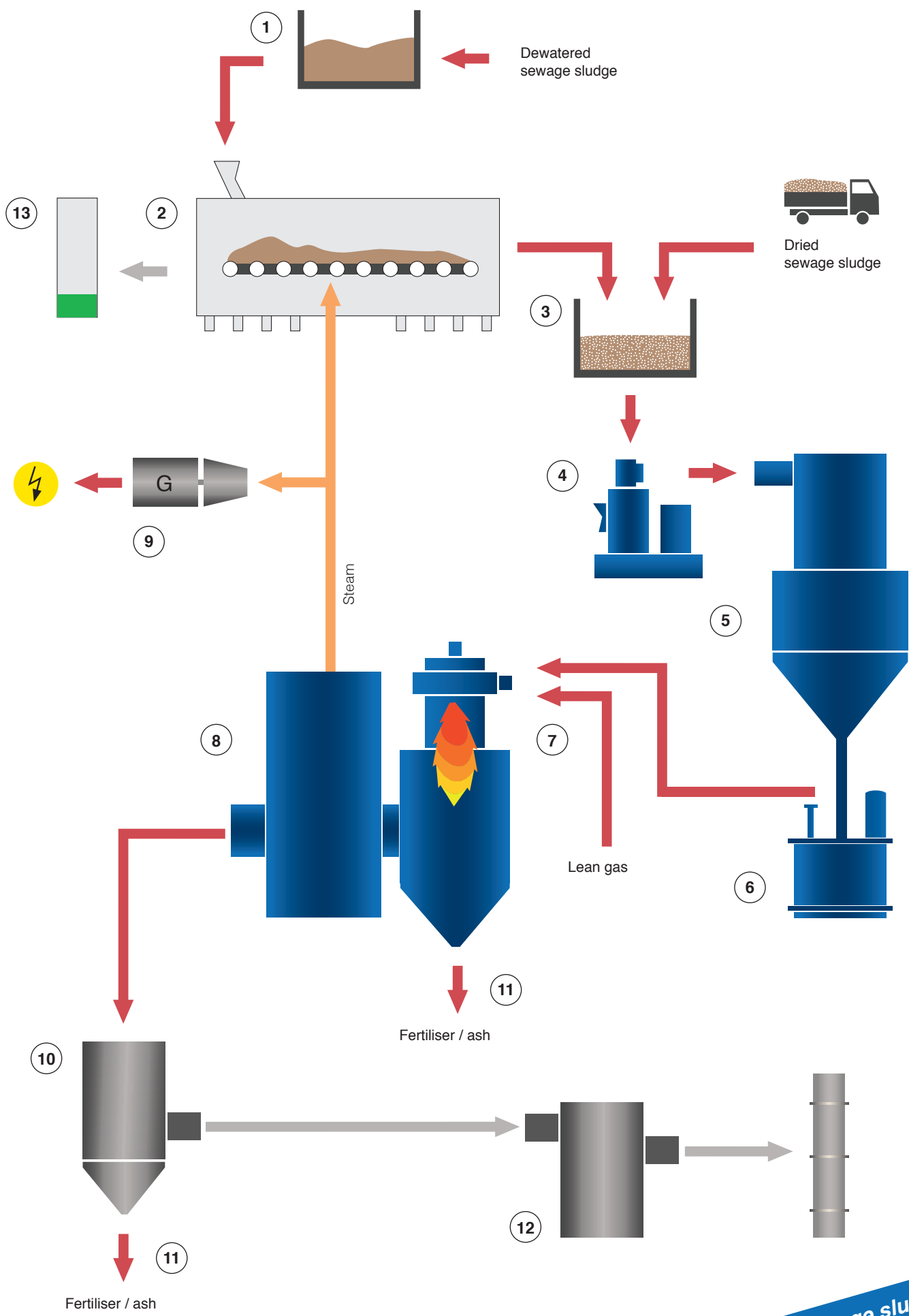
These processes developed by us over decades form the basis for high-quality combustion and the highest possible energy gain.

The **patented impulse burner** incinerates the sewage sludge, producing heat. Benefits of our system: Lean gases can be utilised in the process. The firing method results in an unrivalled high degree of efficiency.

Part of the heat energy that is produced is used for the drying process. Excess energy is used to drive a generator, producing electricity, or can be utilised for other applications.

The **high-grade ash** is separated from the flue gas and can, for example, be used directly as **fertiliser** or for **phosphorous recovery**. The exhaust gas purification system ensures air quality management in full compliance with the 17th Federal Emission Protection Ordinance (BImSchV).

- ① Storage bunker / dewatered sewage sludge
- ② Dryer
- ③ Bunker / dried sewage sludge loading point
- ④ Grinding plant
- ⑤ Fuel storage, pulverised sewage sludge
- ⑥ Fuel dosing system
- ⑦ Impulse burner
- ⑧ Boiler
- ⑨ Generator
- ⑩ Ash filter
- ⑪ Ash discharge
- ⑫ Exhaust gas purification system
- ⑬ Exhaust air purification



Have your sewage sludge tested now with no obligation

Expertise in the incineration of pulverised materials accumulated over decades

– Research centre in Magdeburg confirms the production of phosphate fertiliser from sewage sludge –

Incineration with impulse burner: turning sewage sludge into phosphate fertiliser

We test the high-grade combustion of various pulverised materials such as lignite, biomass etc. in our own research centre. The impulse burner developed by us makes it possible to produce high-quality phosphate fertiliser directly from sewage sludge ash. This has been confirmed by studies.

Reduce costs with our self-contained systems

Another benefit of our systems is that gases produced during the incineration of pulverised materials can also be burned at the same time. Our systems are self-contained, meaning the energy produced by the incineration of sewage sludge is sufficient for the drying process. Excess energy is supplied to the own or external networks.

Have your sewage sludge tested now with no obligation

Not all sewage sludge is the same. Have your sewage sludge tested in our research centre, with no obligation for you, to determine whether it can be used for the production of phosphate fertiliser with no additional intermediate processes.

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