

VSGM Presents MID MIX technology

A circular solution for sludge treatment with a strong business case

The short version

VSGM provides a feasible, circular business solution for the treatment of sludge, and sludge-like waste streams. With the patented MID MIX technology, these input materials are turned into a useful end-product called 'Neutral'. Neutral has multiple applications; from flue gas cleaning to active filler for concrete and asphalt production. If the input material contains ammonia (typical WWTP sludge), it is recovered into ammonium sulphate; a useful resource for the fertiliser industry. Post-processing of Neutral also enables recovery of Phosphorous.



Figure 1: The MID MIX process converts sludge (left) into Neutral (middle) which has multiple applications, such as use in pavement slabs (right)

The MID MIX process concept is based on our patented reactor design, enabling a controlled reaction of sludge with quicklime (Calcium Oxide). The controlled reaction ensures a stable and consistent Neutral product quality, for which certification is obtained for multiple uses. Almost regardless of the input material, there are no waste streams that are not utilized and recovered during our circular process!

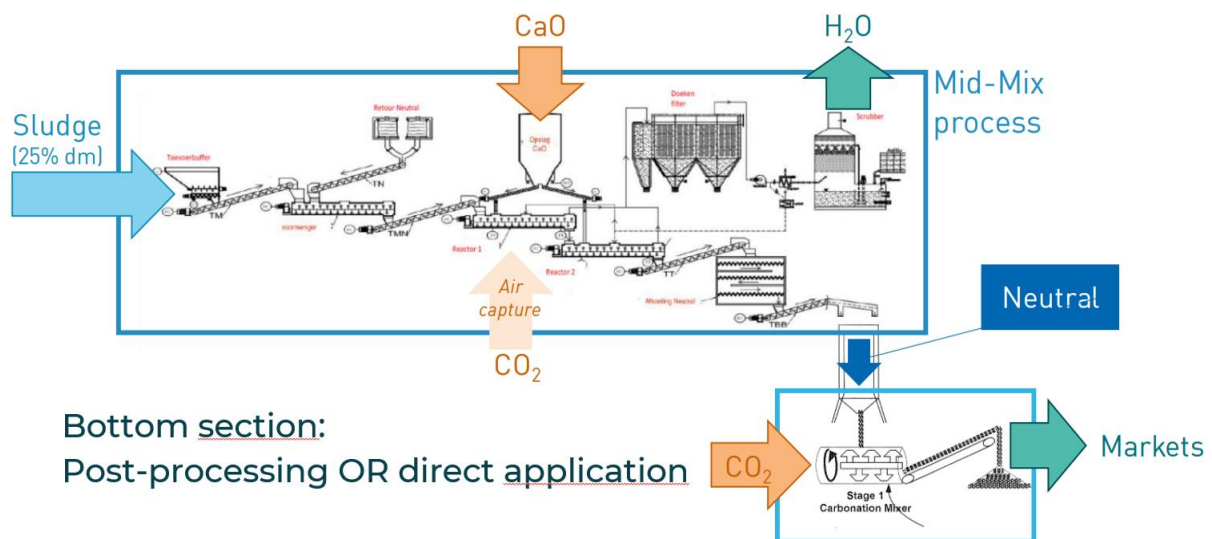


Figure 2: Schematic overview of the MID MIX process, with pre-mixer, reactors, vapour treatment and post-processing of Neutral

Compared to other technologies for (WWTP) sludge treatment, such as mono-incineration, processing of sludge with MID MIX technology:

- Has hardly any CO₂ or NO_x emission
- Significantly lowers PAH and PFOA/PFOS/PFAS levels.
- Encapsulates heavy metals, preventing leaching and environmental harm.
- Has a short investment payback period (usually 2-5 years) and a positive business case.

Almost any input material with a DS content between 18-70% is a useful input material for the MID MIX process. We have processed many materials in our pilot plant (throughput capacity of 4 tons/hour of input material). In 2026 we will build our first full-scale installation for a client in the Netherlands. A full-scale production line has a throughput capacity of 8 tons/hour, which corresponds to between 50.000 and 60.000 ton per year with 24/7 operation. The first plant is aimed at processing primary industrial sludges and waste streams. With this installation in process, we are ready to scale our presence into the wider EU area and are open to discuss opportunities worldwide.



Figure 3: MID MIX process installation

The MID MIX technology can be a valuable addition to your organisation if you:

- Are dealing with sludge from your operations and are looking for an environmentally friendly option that also adds value to your business.
- Are operating in the waste treatment sector and want to expand activities into sludge treatment.
- Are already treating sludge and want to improve your processing capacity, flexibility and/or business case.
- Are a consultancy firm, EPC contractor or solution provider in the water/sludge treatment sector and want to provide your customer with a sustainable solution that offers value for money.

Alternatively, our end product Neutral can help your organisation if you:

- Are looking for secondary Calcium hydroxide alternatives to reduce the carbon footprint of your operations or products
- Are interested in capturing CO₂ from your own process emissions (Neutral has Carbon capture potential of up to 600 kg CO₂ per ton of Neutral)

Does your company meet any of the above criteria? Then MID MIX can improve your and/or your client's business. Let us help you and reach for more detailed information or to plan a (digital) meeting.

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