

- ABHITZE
- BIOMASSE
- PRIMÄRBRENNSTOFFE
- FESTE ENTSORGUNGSSTOFFE
- FLÜSSIGE & GASFÖRMIGE ENTSORGUNGSSTOFFE

SEWAGE SLUDGE COMBUSTION PLANT KENOW BREMEN GERMANY



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Number of Lines		1
Fuel		Mechanically dewatered and solar-dried sewage sludge
Low Heating Value (min./nom./max.)	MJ/kg (dry)	12,3 / 13,5 / 14,3
Dry Matter (min./nom./max.)	%	22,2 / 23,7 / 25,7
Fuel Flow (dry)	t(DS)/a	55.000
Rated Thermal Input	MW _{th}	18,5
Steam Capacity	t/h	21,6
Steam Pressure	bar	65
Steam Temperature	°C	450
FW-Temperature	°C	120
Flue Gas Exhaust Temp.	°C	190
Auxilliary Fuel		Natural Gas H
Operating Approval	acc.	17. BlmSchV
Commissioning	Year	2023

THE TASK

In order to ensure an environmentally, climate-friendly and economical disposal route for municipal sewage sludge from Bremen and the surrounding area, KENOW GmbH & Co. KG planned the construction of a single-line sewage sludge combustion plant with fluidised bed technology. Standardkessel Baumgarte was commissioned with the construction of the mono-sludge combustion plant for the thermal utilisation of the municipal sewage sludge produced. The SSIP will be built on the site of Bremen's Industriehäfen district in the immediate vicinity of swb's Hafen power station. The plant will produce hot steam for electricity generation as well as district heating, which will be fed into the public grid.

THE SOLUTION

The combustion system chosen was the stationary fluidised bed, Raschka system. The sand layer in the fluidised bed furnace is uniformly fluidised by means of combustion air and thus expands to form a fluidised bed approx. 1.5 m high. The pre-dried sewage sludge is fed to the combustor by means of a throw feeder and distributed evenly over the fluidised bed. A boiler system specially developed by Standardkessel Baumgarte for utilising the waste heat from sewage sludge combustion is installed downstream of the fluidised bed furnace. The boiler is designed as a 2-pass natural circulation steam generator in vertical, upright construction with evaporator, super heater and economiser heating surfaces.

SERVICES

- Basic- and Detail Engineering
- Manufacturing, Supply, Construction, Commissioning
- Test Run, Performance Test, Documentation

SCOPE OF SUPPLY

- Redundant Storage Bunker
- Transport System for Sewage Sludge incl. Sewage Sludge Dryer and Vapour Condenser
- Fluidised Bed Combustion System incl. Combustion Air System
- Aux. Firing System, SNCR
- Steam Generator
- Feed Water Tank with Dearator, FW-Pumps
- Exhaust Air Cleaning (Bio-Filter)
- Steel Structure, Boiler House Steel Structure, Steel Structure for Drying Hall

