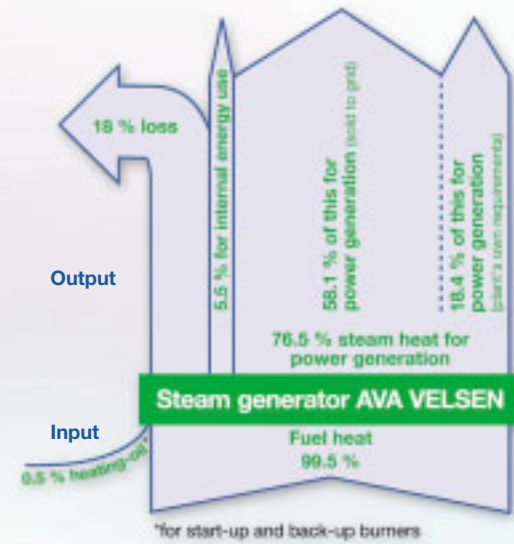


Our track record

Generating energy from waste



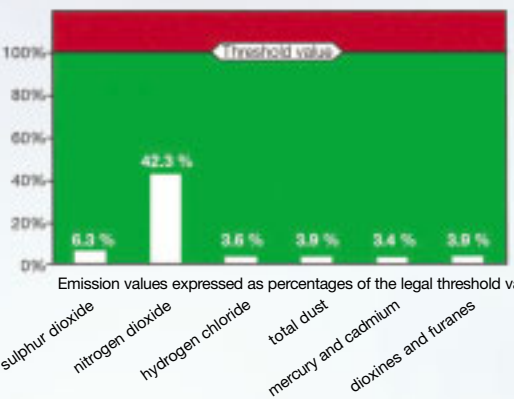
The AVA Velsen produces approx. 125 million kilowatt hours of electricity per year from 210,000 tonnes of household and commercial waste. The energy content of the waste corresponds roughly to that of 54 million litres of heating-oil.

What gets left over



Approximately 1/3 of the waste is left over in the form of ash and flue gas cleaning residues. These residues are reprocessed and recycled.

Below the limit



Waste-to-energy plants are obliged to observe strict threshold values for emissions. The values from the waste-to-energy plant in Velsen are well below those prescribed.

For your notes:



The waste-to-energy plant at Velsen



: Data & Facts :

An important element in the waste management sector in Saarland

The Velsen waste-to-energy plant is an important element in the waste management sector in Saarland, a small state with 1 million inhabitants in the South West of the Federal Republic of Germany. Saarland's Waste Disposal Association (EVS), a joint body comprising the 52 local communities in Saarland, is responsible for the ecologically sound disposal of Saarland's waste. For the operation of the Velsen waste-to-energy plant an operating company was jointly formed by the EVS subsidiary EVS Gesellschaft für Abfallverwertungsanlagen mbH and the ecological technology company SOTEC GmbH. SOTEC is also responsible for the operation of the waste-to-energy plants AHKW-Neunkirchen, MHKW-Pirmasens and TREA-Breisgau - all in Germany -, and the ETRS da Meia Serra on Madeira.

Main features of the plant

Owner:	EVS Gesellschaft für Abfallverwertungsanlagen mbH
Operator:	AVA Velsen GmbH
Material logistics:	Entsorgungsverband Saar (EVS)
Systems:	2 boiler lines at 15 tonnes per hour Grate-firing 4-stage flue gas cleaning
Capacity p.a.:	210,000 tonnes of household and commercial waste
Electricity produced:	90,000 MWh p.a.
Amount invested:	€ 203 million



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Combustion grate

At a combustion temperature of over 850° C, many harmful substances are already destroyed.

Boiler

The hot combustion gas transmits its energy to the water-steam circulation system via heat exchange surfaces before it passes through the flue gas cleaning system.

Electrostatic precipitator

A large proportion of the dust and the heavy metal bound to the dust is separated out here.

De-dioxination

The fabric filter contains a filter layer of activated carbon and calcium hydrate. It thus binds dioxines and furanes.

Stack

Only flue gas which has been fully cleaned is passed to the 96-metre-high stack.

Waste pit

With a volume of 9300 m³ it is large enough to compensate for fluctuations in delivery quantities and maintenance times.

Delivering range

Domestic and non hazardous industrial waste is transported to the waste-to-energy plant by lorry. The completely enclosed delivery zone prevents smells.

Slag discharge

The slag produced in the thermal treatment is cooled in a water bath and transported to a sorting plant. The separation into mineral and metallic components is carried out there.

Domestic and non hazardous industrial waste is turned into energy

The energy generated by the incineration process is used to power both the plant itself and private households and businesses.

Wet flue gas cleaning

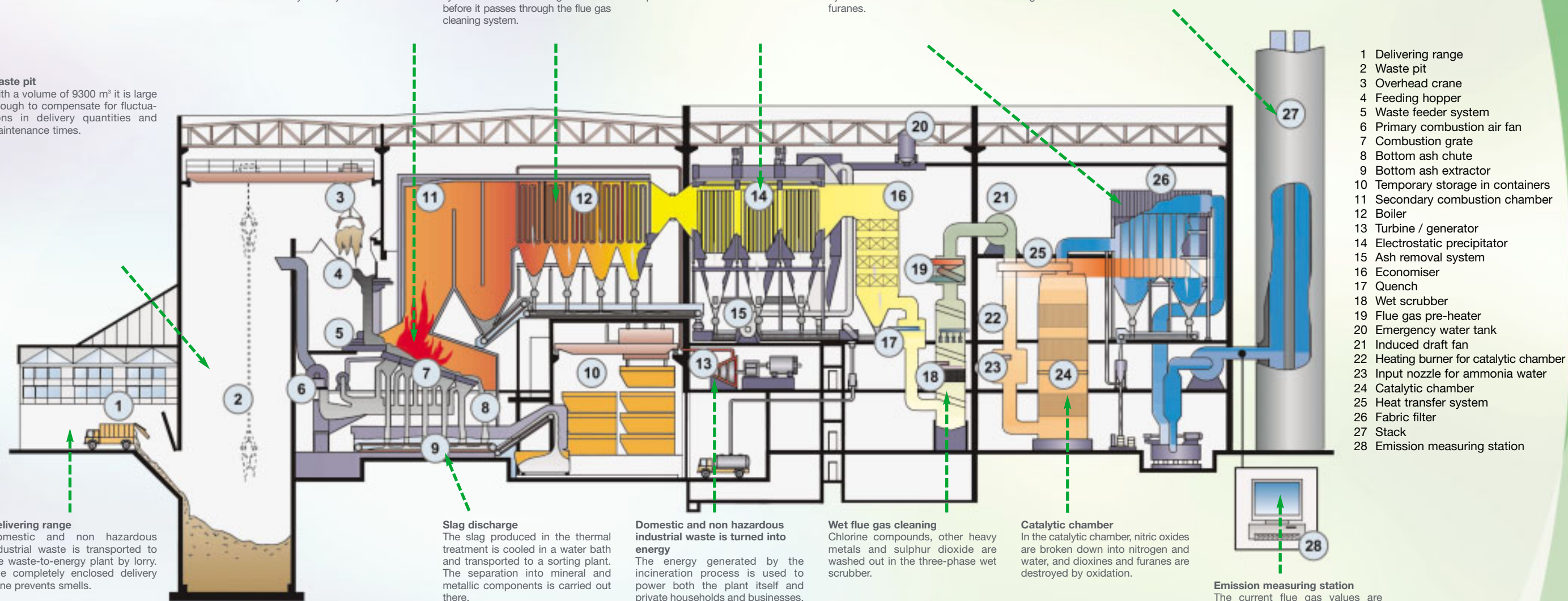
Chlorine compounds, other heavy metals and sulphur dioxide are washed out in the three-phase wet scrubber.

Catalytic chamber

In the catalytic chamber, nitric oxides are broken down into nitrogen and water, and dioxines and furanes are destroyed by oxidation.

Emission measuring station

The current flue gas values are constantly monitored, logged and documented.



- 1 Delivering range
- 2 Waste pit
- 3 Overhead crane
- 4 Feeding hopper
- 5 Waste feeder system
- 6 Primary combustion air fan
- 7 Combustion grate
- 8 Bottom ash chute
- 9 Bottom ash extractor
- 10 Temporary storage in containers
- 11 Secondary combustion chamber
- 12 Boiler
- 13 Turbine / generator
- 14 Electrostatic precipitator
- 15 Ash removal system
- 16 Economiser
- 17 Quench
- 18 Wet scrubber
- 19 Flue gas pre-heater
- 20 Emergency water tank
- 21 Induced draft fan
- 22 Heating burner for catalytic chamber
- 23 Input nozzle for ammonia water
- 24 Catalytic chamber
- 25 Heat transfer system
- 26 Fabric filter
- 27 Stack
- 28 Emission measuring station