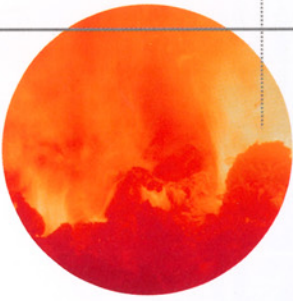


Waste to Energy

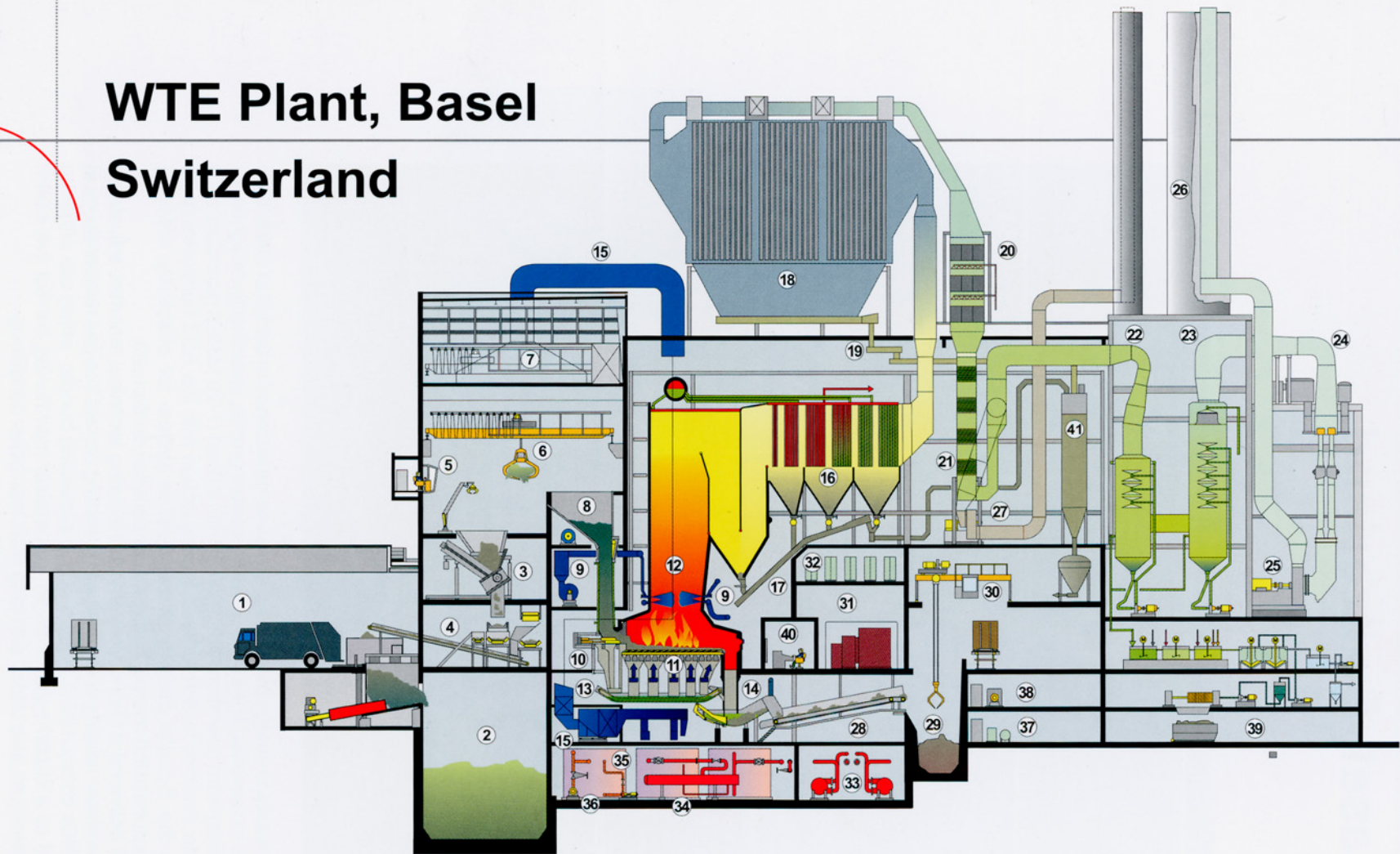
Basel, Switzerland



The waste to energy plant Basle III was commissioned in the fall of 1998. Both of its incineration lines include water-cooled grates, specifically designed for the long-term operation with high calorific valued (7-20 MJ/kg) municipal solid waste. Another feature utilised in conjunction with the ABB horizontal grate was the 2-phase primary air combustion system for effectively reducing emissions at the source, before the air pollution control unit.

ABB delivered a Flex-boiler with the following technical features: adjustable economiser heating surfaces for maintaining correct flue gas temperatures at the NO_x catalyst inlet. Additionally, a protecting bundle, which can either be used as a superheater or as an economiser maintaining correct live steam temperature, also under part load and clean boiler conditions.

WTE Plant, Basel Switzerland



Technical data

| | |
|--------------------------|------------------|
| Annual capacity: | 240,000 t/waste |
| Number of lines: | 2 (water-cooled) |
| Waste capacity per line: | 15 t/h |
| Steam output per line: | 55 t/h |
| Thermal output: | 47 MW |
| Steam pressure: | 40 bar |
| Steam temperature: | 400°C |

| | | | | |
|---------------------------------|--|--------------------------------------|--------------------------------|---------------------------|
| 1 Tipping hall (train / truck)) | 10 Waste feeder | 18 Electrostatic precipitator | 27 Emergency fan | 36 Hot water pumps |
| 2 Waste bunker | 11 Grate | 19 Fly ash transport (electr. Prec.) | 28 Slag conveyor belt | 37 Compressor room |
| 3 Bulky waste cutter | 12 Combustion chamber | 20 DeNOx-plant | 29 Slag bunker | 38 Emergency generator |
| 4 Metal separation | 13 Grate siftings conveyor | 21 Economizer | 30 Slag crane | 39 Sewage water treatment |
| 5 Crane operator cabine | 14 Slag discharger | 22 Quench / acidic scrubber | 31 Turbine / Generator | 40 Control room |
| 6 Waste crane | 15 Primary air system with air preheater | 23 Basic scrubber | 32 L / M - Voltage switch gear | 41 Fly ash silo |
| 7 Crane maintenance | 16 Steam boiler | 24 Aerosol separator | 33 Hot water exchanger | |
| 8 Charging hopper | 17 Fly ash transport (boiler) | 25 Induced draught fan | 34 Heating condenser | |
| 9 Secondary air system | | 26 Stack / emergency stack | 35 Hot water accumulator | |

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