

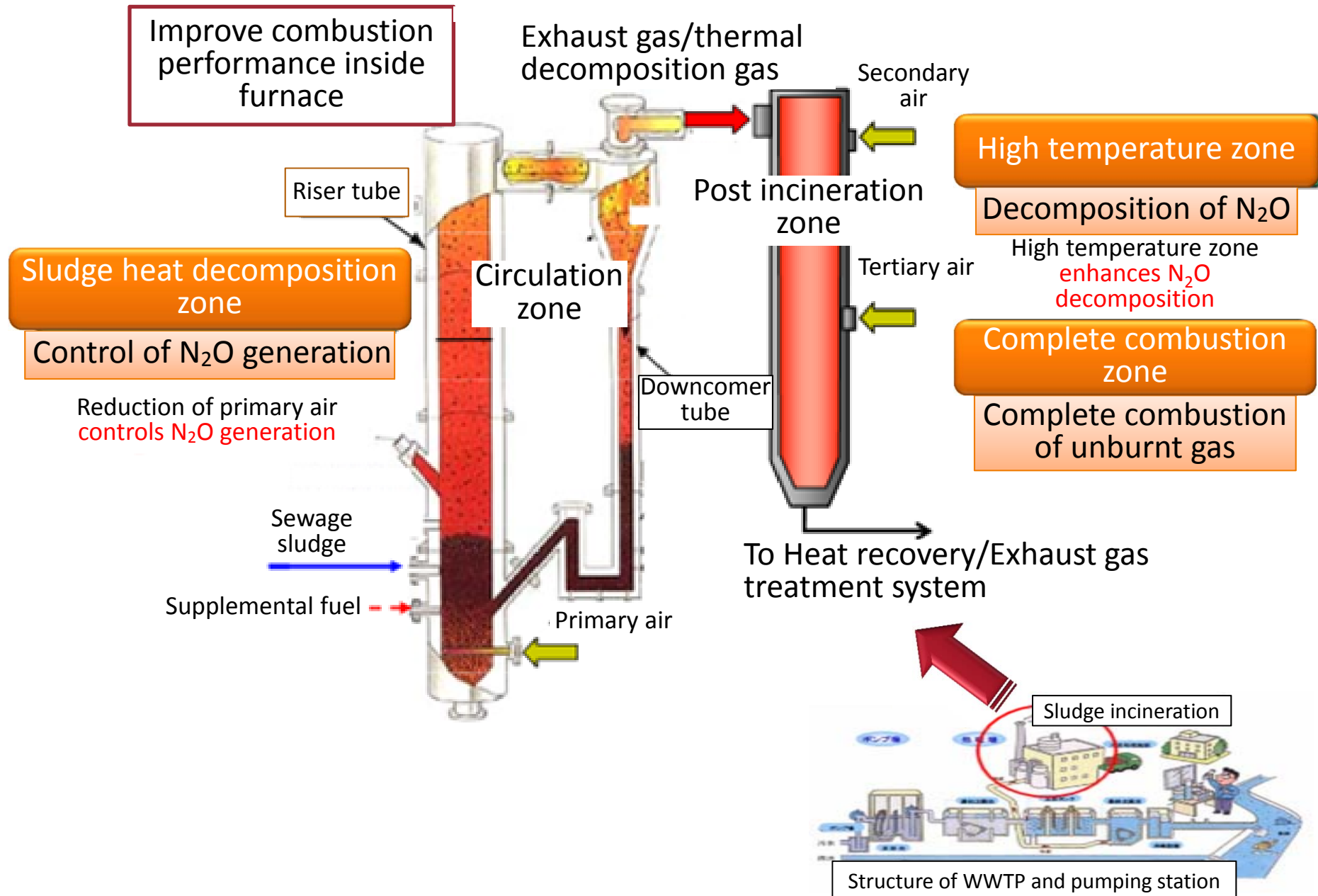
Circulation Multi-layer Furnace

Circulation multi-layer furnace has been developed to optimize combustion. Combustion furnace is divided into three zones. Each zone is supplied combustion air and its volume control enables optimization of combustion.

Reduce greenhouse gas emission in sludge incineration

Greenhouse gas includes not only carbon dioxide(CO_2) but also methane and nitrous oxide(N_2O). Methane has 21 times, and N_2O has 310 times as much greenhouse effect as CO_2 , and they have significant impacts on global warming even with a small amount. Since sewage sludge has a bigger ratio of nitrogen(N) than garbage, its N_2O , which combustion exhaust gas includes, may be the cause of global warming. Therefore in sludge incineration, the inhibition of N_2O generation is required. In sludge incineration, an increase in combustion temperature (from 800 to 850°C) reduces N_2O generation, but it increases supplemental fuel consumption such as heavy oil and city gas, which increases O&M costs. Sludge incineration requires inhibition of N_2O generation while moderating supplemental fuel consumption.

Configurations of Circulation Multi-layer Furnace



Features of Circulation Multi-layer Furnace

Reduce fuel consumption

- Combust heat decomposition zone at comparatively low temperature
- Localize high-temperature zone



Reduce N₂O

- Inhibit generation of N₂O at heat decomposition zone
- Decompose N₂O at high temperature zone