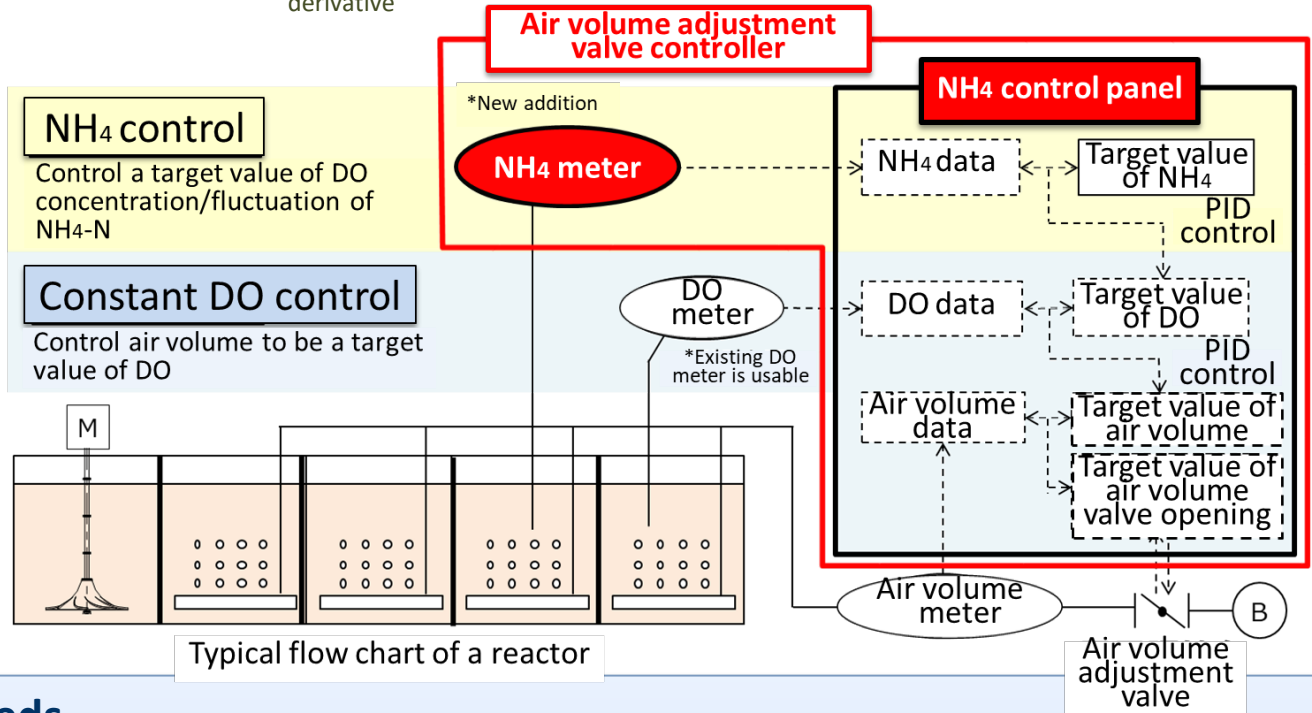


Aeration Control Device Consisting of Ammonia Meter and Control Panel

Developers: Kobelco Eco-Solutions Co.,Ltd.

An ammonia meter and a DO meter installed in the reaction tank **control airflow** to automatically adjust the target DO concentration according to the nitrification status, to achieve both **energy saving** by reducing airflow and **stabilization of treated water quality** (such as NH₄-N concentration).

✓ Feedback Control of Air volume based on NH₄-N concentration measurements at later stages of the reactor ⇒ Variable OD control with two stage PID control*
 *PID control: a basic, general-purpose feedback control in which the input value is controlled by three elements: the deviation of the output value from the target value and its integration and derivative



Needs

- Energy saving of blower
- Stable NH₄-N concentration for treated wastewater

*Assuming that the system is an activated sludge process facility that promotes nitrification. However, the OD process is excluded.

Benefits

- Energy saving by reducing air flow rate
 ⇒ 10% or more against constant DO control
- Stabilize NH₄-N concentration of treated effluent
 ⇒ low concentration of 0.5-1.0mg/L