

Energy-saving sewage treatment system using highly-efficient solid-liquid separation technology and dual dissolved oxygen control technology

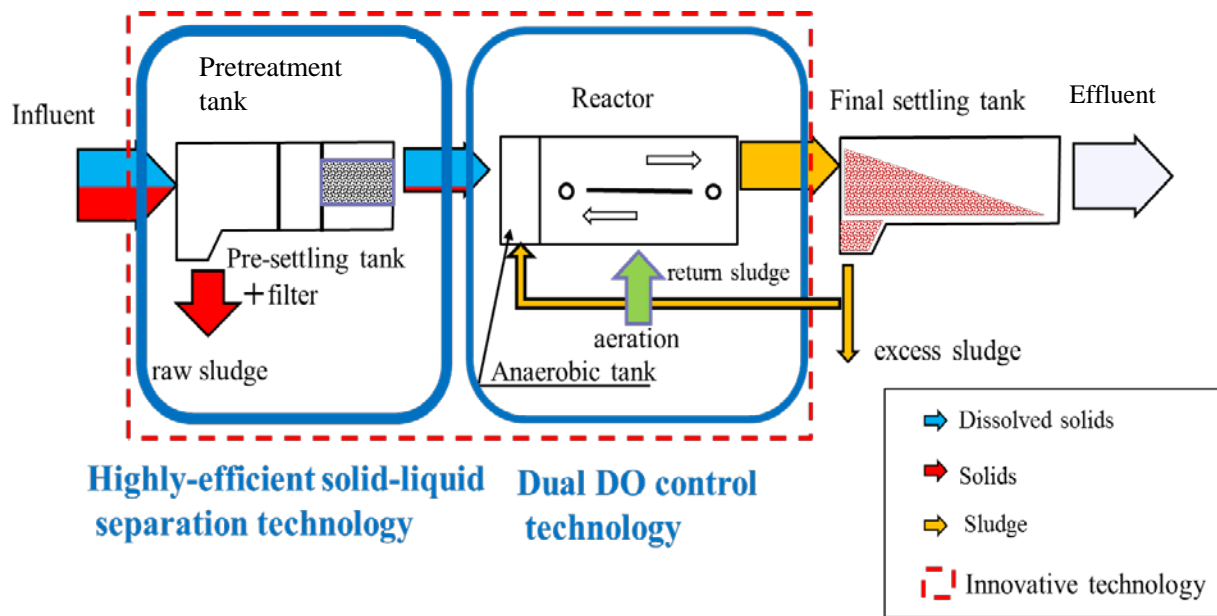
Conducted by: Consortium between Maezawa Industries, Inc., Ishigaki Company, Ltd., Japan Sewage Works Agency, Saitama Prefecture

Demonstration Field: Koyamagawa Water Recycling Center, watershed of the right bank of the Tone river

Study overview: • High efficiency solid/liquid separation technology at the pretreatment tank instead of the conventional gravity settling

• Upgrade from the conventional activated sludge (CAS) process to Nitrification-denitrification process offering the same Hydraulic Retention Time (HRT) as CAS

• Saving energy consumption by applying dual DO control technology to the aeration tank which is converted to the endless channel



Technical evaluation

- Solid/liquid separation process provides highly efficient SS removal and takes less space than gravity settling.
- Nitrification-denitrification process used CAS aeration tank offers the same HRT as CAS.
- Dual DO control technology maintains automatically controlled aeration rate
- This technology delivers a high internal circulation rate in an endless channel aeration tank and achieves efficient T-N removal while also saving energy since no circulation pumps are needed