

POD

Prefabricated Oxidation Ditch

Small Centralized Wastewater Treatment



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POD (Prefabricated Oxidation Ditch)

POD is the packaged system for the small-scale oxidation ditch process (OD) that was developed in Japan. The prefabricated concrete configuration reduces the construction period and stabilizes the quality of civil works. The design is fully standardized and can reduce the design and construction process.

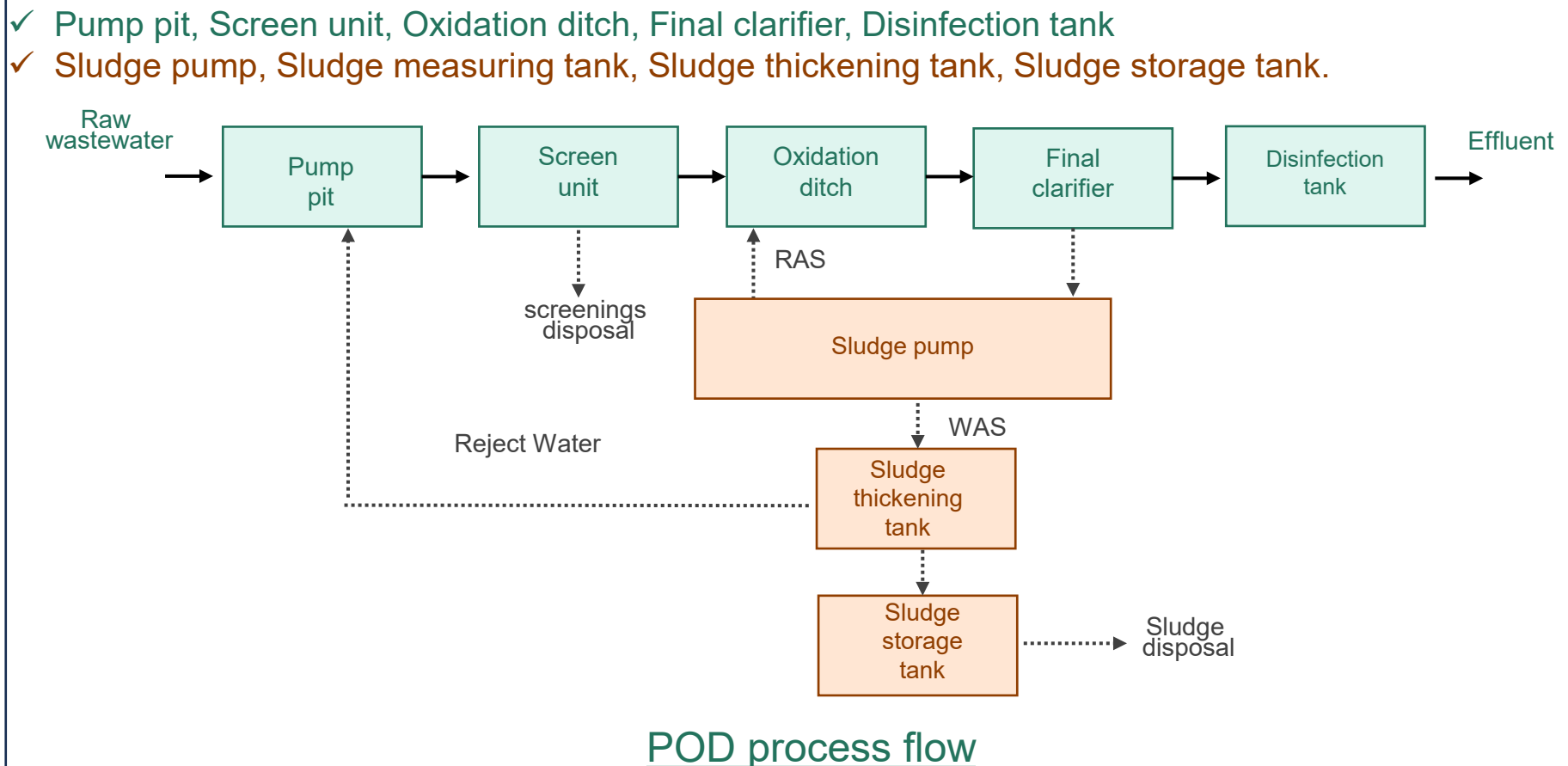
- Developed Since 1982
- First installation : 1988
- Installation: 185 WWTPs



Target Scale

- ✓ Population: 1,000 ~ 4,000 people
- ✓ Capacity: 300 ~ 1,200 m³/d (for 300pitch)

System Flow



Performance

- ✓ BOD, SS Removal : Max 95%
- ✓ T-N Removal: Max 70%*
- ✓ T-P Removal: Max 80%**

* : In case of the specific design and operation for nitrogen removal

** : In case of phosphorus removal by simultaneous coagulant

Prefabricated Concrete Structure

Except for the bottom concrete, almost all civil works are made of prefabricated concrete. It enables the shortening of construction time and reduces labor costs.



Carrying in the exterior walls



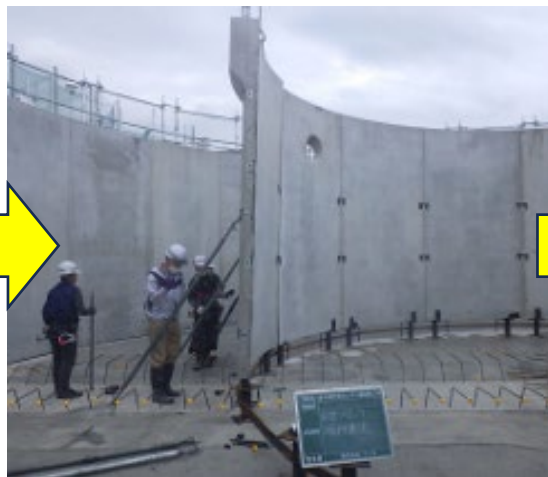
Crane installation



Installation of external walls



Installation of exterior walls completed



Installation of inner walls



Installation of inner walls completed



Bottom plate concrete works



Installation of cover blocks



Installation completed

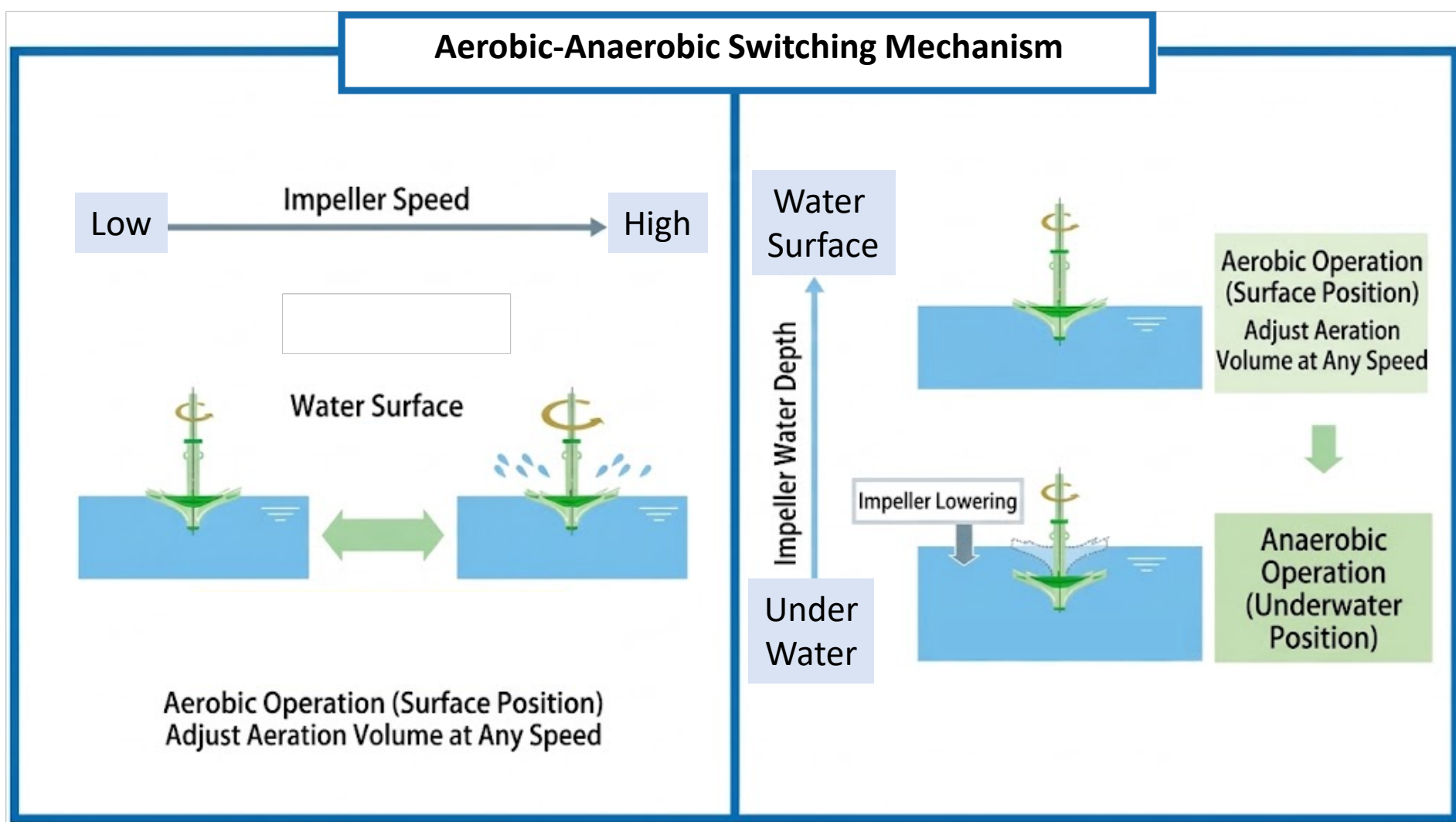
Special Aeration Device

For POD aeration and agitation, we use the special aeration device, which was developed and installed widely in Japan. A motor and reduction gear are on top of the ground, enabling easy maintenance and a long life for the device.



Aerobic-Anaerobic Switching Mechanism

Our special aeration device can create both aerobic and anaerobic conditions in one tank. During aerobic time, the impeller aerates the water surface at high speed, whereas during anaerobic time, it goes underwater and spins slowly.



Seeking partners for demonstration!

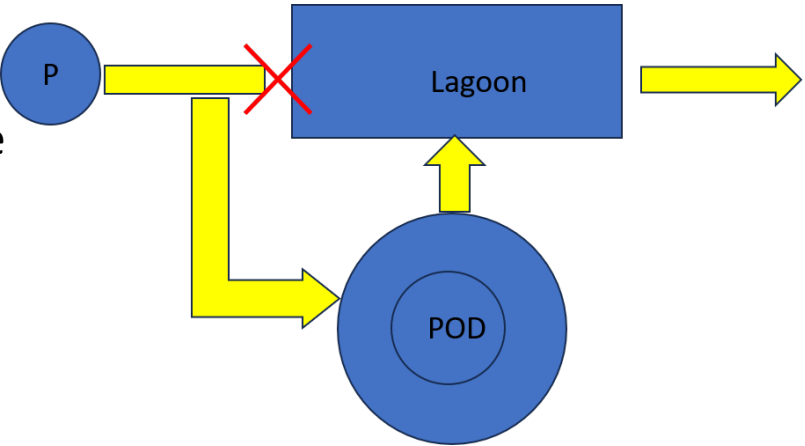
We are looking for partners for the demonstration of POD. Municipalities that have an old lagoon that needs to be replaced or need to expand a lagoon are the best partners for this. (The minimum POD capacity is 300m³/day.)

Before Pilot

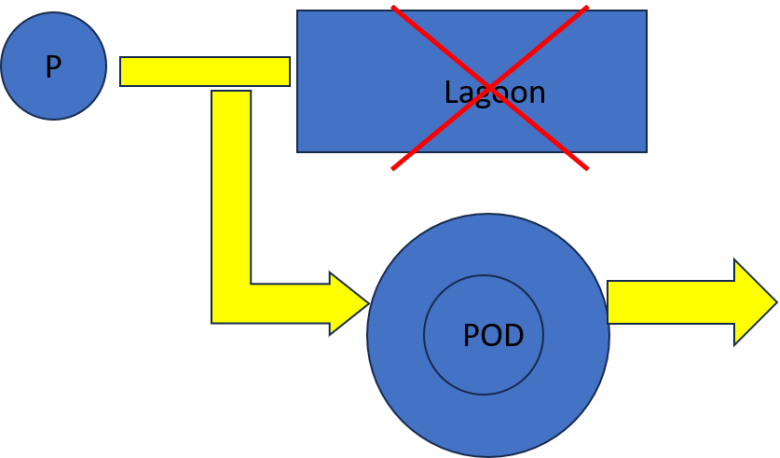


During Pilot

(Treated water at POD is sent to the lagoon until getting the discharge permit)



After Pilot



Capacity and footprint requirement

Capacity (m ³ /day)	D	d	w	h	h	t1	t2	t1	t2	t3
300	13,500	7,000	3,100	4,100	3,700	150	150	300	300	400
600	18,900	9,800	4,400	4,100	3,700	150	150	300	300	400
900	23,100	12,000	5,400	4,100	3,700	150	170	300	320	400
1200	26,700	13,900	6,250	4,100	3,700	150	170	300	320	400

