The study for practical use of high rate filtration institution at Chishima wastewater treatment plant.

Whole term	2005.6～2005.11	

(Purpose)

A remedy of Osaka-city aims for increasing consecutive treated wastewater of a rainy day. On this account it became an urgent problem to improve combined sewer system. From such a thing, introduction of high rate filtration institution is examined as a substitute institution of primary settling tank. It is a characteristic that this technology is usable on not only rainy days but also fine days.

By a normal design, it is performed load factor per unit water surface for 25～50m^3/m^2/day. When we adopted a “wet-weather high-speed wastewater filtration system” developed in the MLIT (Ministry of Land, Infrastructure and Transport), we can adopt 500m^3/m^2/day as design load factor. As a result, function as primary settling tank can come to support in about a one-third plane space.

In this study, we introduce this system into an institution of Osaka city and for the purpose of reducing an area of primary settling tank. Furthermore, let processing capacity at rainy weather increase by introducing “wet-weather high-speed wastewater filtration system” into space provided by this technology.

(Result)

Based on technology developed by an SPIRIT-21 (Sewage Project, Integrated and Revolutionary Technology for the 21st Century), we improved high rate filtration technology. In particular, development about driving methods that continued from rainy weather to fine weather was performed in this study.

As a result of having investigated with an experiment plant, that there was equal performance was identified as usual primary settling tank. And good treatment capacity was continued when it ran consecutively for eight months when included rainy and fine weather.

As a result of study, it was confirmed that this technology was effective as a substitute institution of primary settling tank.

(Future schedule)

In future, this technology is going to be introduced into existing primary settling tank at Chishima wastewater treatment plant of Osaka city.

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