

Study on the sewage treatment system using media

Whole term

1994. 10 ~ 1995. 3

(Purpose)

In addition to the removal of organic matters, a sewage treatment plant located in close proximity to surface water bodies such as bay area, lake and swamp has to be capable of removing nutrient materials such as nitrogen and phosphorus which might cause eutrophication.

The existing technology for the removal of nutrient materials using suspended biological treatment needs a relatively large treatment tank since the retention time of microorganisms in the treatment tank has to be maintained longer.

Therefore, the sewage treatment system using media which has been developed with the opportunity of “ Biofocus WT” , aims at maintaining a high concentration of microorganisms and an increase of the retention time of the microorganisms in the treatment tank, without using the existing solid-liquid separating process.

This joint research published a technical manual on the sewage treatment system using media developed by each company and arranged methods on the design and maintenance to provide basic information so that it would be accepted as a treatment system.

(Results)

The objective of this method is to stabilize the capacity and the efficiency of the treatment tank by using immobilized microorganisms with high concentration.

The aims of the research were advanced treatment system I (BOD, SS and nitrogen removal) and advanced treatment system II (BOD, SS, nitrogen and phosphorus removal).

1. Contents of the manual

The contents of this manual are: Chapter 1. Introduction; Chapter 2. Design; Chapter 3. Maintenance; Chapter 4. Specifications; Annex model design; and an appendix titled “ Summary of each technology.”

“ Chapter 1: Introduction” explains the definition of media, principle, facilities and the characteristics of the system.

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Keywords

Media, Advanced treatment system