

Investigation on the actual conditions and demand for remodeling

Whole term

1993. 8~1994.3

(Purpose)

The local governments that started sewage works since the early period need to remodel sewage facilities because of the deterioration and malfunctioning. Even in case of relatively a new facility, remodeling or repair is done with respect to physical, economical, and functional conditions. The demand for remodeling is increasing either due to the deterioration or for the advancement of wastewater treatment plants and pump stations. Consequently, problems in case of remodeling should be addressed by applying technical solutions.

Therefore, the technology of remodeling has to be developed. This research focused on understanding and investigating the conditions of remodeling and simultaneously collecting the basic information on the technology development.

(Results)

In this study, a survey was carried out in local governments having 5 year old wastewater treatment plants, about remodeling of the wastewater treatment plant and the pump station. Opinions could be obtained from 336 local governments and 546 treatment centers. The results were as follows:

55 % of the plants included in the survey had been remodeled and 80 % of the remodeling work had been applied in the mechanical and electrical apparatuses. When remodeling most of the mechanical and electrical apparatuses, each entire system was replaced with a highly functional type, instead of replacing only the faulty portion. The duration of these new systems is almost up to the standard duration. However, there was a large difference according to the number. Investigation on the repair cost showed that remodeling had been done until the cost became 2,000 yen /m³/day. According to an investigation on the site occupancy, the existing occupancy was 40 %, and it seemed that as per the shape of the site and the layout of the facility, there would be no room for adding an alternative facility to remodel a large scale engineering structure in the future.

Pump stations had the same results as the treatment plants.

Research funded by Japan Sewage Works Agency

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Keywords

Sewerage system, Sewage treatment plant, Pump station, Remodeling, Repair