

실규모 폐수처리장의 고도처리 최적화를 위한 활성슬러지모델 보정 방법

유창규*, 이인범
포항공과대학교
(ckyoo@postech.edu*)

Since the introduction of activated sludge model no.1 (ASM1) in 1987 [Henze et al., 1987], numerous studies have been reported dealing with calibration of activated sludge models. A recent thorough review on calibration of activated sludge models has documented that there are a large number of experimental methodologies proposed and applied for the calibration. The choice of calibration approach and experimental procedures followed by practitioners during calibration depends heavily on the case under study i.e. ad hoc approaches are typically followed. In this research, a systematic calibration of the activated sludge plant models is applied for full-scale WWTP optimization. Specially, the most important factors in ASM modelling and calibration are the accurate influent wastewater characterization, nitrification parameters, and the SRT in the system, since they are correlated. Upon “successful” calibration and validation of the model, the calibrated model can finally be used to achieve the optimization objectives of wwtp, e.g. decreasing the aeration demand, improve effluent nitrogen and phosphorous concentrations of the plant.