

عنوان مقاله:

Water and wastewater minimization using non-linear programming

محل انتشار:

ششمین کنگره بین المللی مهندسی شیمی (سال: 1388)

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خلاصه مقاله:

Water system integration can minimize both the freshwater consumption and the wastewater discharge of a plant. As a case study, the water system in a chemical plant is integrated. The plant consumes a large amount of freshwater and discharges a large amount of wastewater, so minimization of both the freshwater consumption and the wastewater discharge is very important to it. According to the requirements of each water using process on the water used in it, the contaminants and the limiting concentrations are determined. To reduce the freshwater consumption and the wastewater discharge, decentralized regeneration recycling is considered. After the water system integration, the freshwater consumption is reduced by 31.4%, and the wastewater discharge is decreased about 20%.

کلمات کلیدی:

water system – integration – distributed treatment system - minimization

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