Abstract

This article addresses a fuzzy logic approach to calculate the optimum minimum allowable composition difference (?) to target the minimum total annualized cost (TAC) of a mass exchange network (MEN), which is based on combining composition interval diagram (CID) with fuzzy set theory. The value of ? directly affect the TAC as a main constrain. By utilizing this decision algorithm it gives the opportunity to calculate the optimum composition difference by decision making from a wide range of assumed ?. This method is very simple and more convenient than the methods previously published; as the decision is taken without calculating TAC for every assumed ?.

References

design Tools.
Academic Press.
AIChE Journal , 1233-1244.
- Fábio J. J. Santos, H. A. (December 2010). Fuzzy Systems for Multicriteria Decision
the singularity of the Kremser equation. Comp. & Chem. Eng. , 2331-2335.
Taylor & Francis.
approach to the optimization of in-plant wastewater interception with mass and property
- Hallale, N., & Fraser, D. (2000). Capital and total cost targets for mass exchange
-1679.

Index Terms

Computer Science Fuzzy Systems

Keywords
Mass exchange network Fuzzy Approach Mass Integration Process synthesis
Process Optimization

Multi-objective decision making