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

- El-Halwagi, M. M., & Manousiouthakis, V. (1990a). Automatic synthesis of mass exchange network (MEN), which is based on combining composition interval diagram (CID) with fuzzy set theory.
Fuzzy Approach for the Synthesis of Mass Exchange Network


Index Terms

Computer Science  Fuzzy Systems

Keywords

Mass exchange network  Fuzzy Approach  Mass Integration  Process synthesis
Process Optimization

Multi-objective decision making