

## Process Retrofit Design Using the Disjunctive Programming Techniques

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In recent years, there has been rapidly growing interest in process retrofit for many reasons. Retrofit design projects are aimed at finding the ways to maximize the use of equipment, and thus minimize expenditure of new capital, when the production objectives change. Although there were many approaches for the retrofit design or optimization, most of them depends on the heuristics or much time-consuming methods. In this work, we propose the systematic approach for the process retrofit using disjunctive programming techniques. It is a useful way to optimize the process retrofit design and to minimize the engineering effort required to identify the most important retrofit opportunities. The results of case studies show that we can obtain large operation cost savings with a small investment costs with these approaches.