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Section:

17. Control Theory and Optimization

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Experiences with the Optimization of Batch Distillation Processes

Our aim is to compute the parameters to follow a given strategy for a batch distillation process such that several restrictions (i. e. product concentration) are fulfilled and a given functional is minimized (i. e. process time).

First of all we have to solve such "normal" problems as finding consistent solutions which fulfill all restrictions. Secondly, we have to solve a more general problem, i. e. computing just a "good" solution in acceptable time which is not necessarily an optimal one.

Using the given simulation code from our industrial partner we have to deal also with several problems such as discontinuities of the right hand side or hidden restrictions which are caused by the domain of definition of the implemented models.