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Optimization of Operations and Quantities in Chemical Batch Reactors

Supervisor: Assoc. Prof. Ing. Gazdoš František, Ph.D.

Department: AURP

Consulting Supervisor: Ing. Macků Lubomír, Ph.D.

Programme: ARI-EN

Abstract:

The thesis aim is to develop a procedure leading to the optimal reactor dimensions design with respect to the particular process quality and economy. Batch and semi-batch reactors are currently routinely used in industrial processes and to reach an economical reactor producing top products both suitable control algorithm together with apropriate dimensions (geometry) design are necessary. The task is to study processes and variables occurring in batch and semi-batch reactors as well as the whole process optimization based on their impact on the process. The influence of reactor geometric dimensions on the technological process will also be considered. Implementation is expected in the Matlab/Simulink, Mathematica or similar software.

Literature:

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