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Choosing the plant model for the linear static optimization problem in process industries.

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The static optimization problem for chemical process industries is usually stated as a linear programming problem, and the static plant models are linearized in one way or another. In this article, we consider effective linearization of plant models ensuring the desired level of accuracy. We show when piecewise-linear models should be preferred and when it is better to use "many-valued" models which have a whole set of plant output values associated with a given input value.

MSC:

[90B30](#) Production models

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[on-line control](#); [production planning](#); [static optimization](#); [chemical process](#); [linearization of plant models](#)