

The concept and use of BALAS

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Abstract

BALAS is a steady-state simulation package for pulp and paper mills with a extensive selection of unit operation modules for e.g. mechanical pulping, paper machine line, heat recovery, water and wastewater treatment, and power plants. It permits applications on site-wide material and energy balances, heat recovery and heat integration analyses, modelling of dissolved and colloidal substances, as well as process optimisation and fitting process model to measured data. For output of results it has a direct interface to EXCEL. However, so far it has been lacking the capability to handle the very complex chemistry of fiber suspensions. This problem has been solved by the integration of ChemApp into BALAS. Thus it was made possible to handle the Donnan equilibrium (two aqueous phases in constrained equilibrium with each other) explicitly within the framework of BALAS.