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Stability Analysis of Hermite Collocation Method for Pulp Washing Models

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Abstract: *Pulp washing is concerned with detaching cellulose fibres from black liquor with the use of a minimal amount of wash liquor. An efficient numerical technique of hermite collocation method is used for the solution of mathematical models related to pulp washing. The linear and non-linear models are solved using Quintic Hermite collocation method with Dirichlet's and mixed Robin's boundary conditions. Numerical solution of the models are derived using MATLAB ode15s. This study deals with the justification of accuracy of the method with stability analysis. The present method is more convenient, simple and elegant for solving the two point boundary value problems and the results found are very much stable from numerical point of view.*

Keywords: Pulp washing, model, eigen values, stability.

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