

Simulation of the steam condensation

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Steam dryers are often used in the drying process of producing pulp and paper. This paper deals with the development and analysis of a physical model concerning the steam condensation in a rotating cylinder. The physical model proposed is formulated as complete equations of mass, momentum and energy conservation. The considered medium has two phase (steam and liquid). The numerical solutions for this nonlinear equations system are obtained by a finite volume method. This approach allows us to determine all the variables of this drying method. : heat-transfer characteristics of the system. This approach is also a complementary tool of the analysis that opens access to non-measurable variables, such as phase velocity. We can therefore conclude that the obtained results are interesting and promising, thanks to this proposed method.