

Title Modelling of parboiled rice in superheated-steam fluidized bed
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Abstract

Mathematical model of paddy drying in superheated-steam fluidized bed has been developed to predict moisture content and temperature. The model was written based on mass and energy balance. The kinetics of gelatinization of paddy at fluidizing condition described by zero-order reaction was also included in the model. The operating parameters set in the model development included superheated-steam temperature, bed depth and superficial superheated-steam velocity. The numeric calculations from the model were in agreement with experimental investigations for different operating conditions. The model was then used to examine the effect of the operating conditions on the drying behavior and gelatinization of paddy.