

THE NEW APPROACH TO THE DRYING PROCESSES MODELING WITH RESPECT OF SOME DECELERATION MECHANISMS ACTIONS

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Abstract

There is an initial part of drying processes physical imagination overview. It is based on the prof. Burdo's book analysis. The authors are trying to do some new steps to develop this processes imaginations and theoretical prescriptions. The key authors' idea is the minimum two forms of decelerations exist during drying processes. The first one is appearing, when moisture on the dried surface external part is beginning to disappear. The second one is appearing, when moisture starts to vaporize from the seeds internal volume, including the liquid - vapor phase border deepening inside internal channels. The deceleration in the first form is connected with last elements of the moisture are beginning to get deeper in the some corners in the contact seeds places. As the result, it is leading to the surface tension pressure increasing and correspondingly decreasing of acting pressure, which ensures the vapor removing. The authors took some significant propositions, which can be undergone serious discussion; they sincere recognize it. However, they are considering that it is more important to understand: Is it right to account these forms of the drying processes deceleration, or not? Their comparison of the calculation results with experimentation data, shown qualitative correspondence. It means that this approach has a sense and can be used in the future as the base for the next steps of the approach development.