Title Heat pump drying

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Abstract

The concept of drying using heat pumps has been studied for over five decades. However, the subject has been the focus of intense research recently and a few improvements have made the technology attractive to different industries. The main advantage of using heat pumps that is now agreed upon seems to be the ability to produce high quality products at a lower energy cost. Optimisation of the heat pump dryers seems to be the major challenge facing the developers of such technologies. Matching the drying process with optimal operation of the heat pump dehumidifier is the subject of most modelling efforts. Due to high capital cost and lack of specialised equipment, the adoption of heat pump dryers has not caught on widely in the commercial sector, with only a few large installations in operation at this time.