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Wicking in the porous pore doublet model

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The porous pore doublet model that was published in 2008 [1] is presented and discussed. The background to the model is that fabrics used for fiber reinforced composite manufacturing often consist of fibers gathered in bundles. Thus, during manufacturing, the liquid resin impregnates a multiscale porous medium and there is a transport between pores of different scales driven by an applied pressure gradient and capillary action. As a simplified version of a fabric a porous pore-doublet model is studied in order to determine the characteristics of the flow. Experiments, as well as theoretical calculations on this generic geometry will be presented.

References

1. Lundström, T.S., Gustavsson, H., Jekabsons, N., Jakovics, A., “Dynamics of wicking during filling of multi-scale porous media: Porous pore-doublet model, experiments and theory”, *AICHE Journal*, 54 (2), 372-380 (2008)

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