CORRECTIONS

Corrigendum to

Weissenberg effect and its dependence upon the experimental geometry

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The possibility of describing the free surface shape in an axisymmetric shear flow (Couette flow) in an experiment with finite dimensions by using a semi-infinite cylinder approximation was discussed. The presented numerical calculations showed that if the bottom of the experimental set-up is not far enough from the free surface, the secondary flow induced by the finiteness of the experiment, and absent in the semi-infinite cylinder approximation, can considerably influence the free surface shape.

However, the presented numerical calculations overestimate the strength of the secondary flow and therefore the strength of the end-effect upon the free surface shape. This is because the numerical simulation converges to a solution which does not satisfy the no-slip condition for the secondary flow at the bottom of the bowl and at the vertical part of the inner cylinder. The reason for this is still unknown to the author. The conclusion that the semi-infinite cylinder approximation provides sufficient accuracy for geometries where the free surface distance from the bottom of the experiment is greater than the gap width remains valid.

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