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Modelling of core-annular and plug flows of
Newtonian/non-Newtonian shear-thinning fluids in pipes and capillary
tubes

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Highlights:

- Exact solution for laminar core-annular flow of Newtonian/Carreau fluid is obtained
- The effect of the rheology on two-phase flow characteristics is studied
- Core-annular flow in capillaries and large pipes is studied
- A model for film thickness and plug propagation velocity is provided

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