

Flow-induced rotation of circular cylinder in Poiseuille flow of power-law fluids

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## Highlights

- Anomalous rotation of pinned cylinder is found to be induced by flow inertia.
- Effect of power-law index  $n$  on the rotating velocity of cylinder is explored.
- Critical  $Re$  beyond which cylinder changes rotating direction is given.
- More stable rotating velocity of cylinder is discovered for different  $Re$  and  $n$ .

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