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The instability of decaying pipe flow JIM DENIER, NATHANIEL JEWELL, The University of Adelaide — In unsteady pipe flow, the frictional aspects have long been calculated using steady-flow formulas, which are demonstrably incorrect. Previous work has limited application because it is based on empirical modelling, rather than on an understanding of the fundamentals of the fluid mechanics of boundary layers in unsteady flow. This talk will present some new results on the problem of the instability of the unsteady flow in a circular pipe that is suddenly blocked.

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