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Experimental and numerical assessment of the hydraulic behavior of a pilot-scale periodic anaerobic baffled reactor (PABR)

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Highlights

- The hydraulic behavior of a pilot-scale Periodic Anaerobic Baffled Reactor (PABR) is studied through experimental RTD tests
- A tank in series model is used for the determination of the equivalent number (N_R) of Continuous Stirred Tank Reactors (CSTR) for the PABR.
- A CFD model for the Periodic Anaerobic Baffled Reactor is developed.
- The hydraulic “dead” space (V_d) in a PABR is calculated.
- The flexibility of the PABR to perform as a CSTR, as a Plug Flow Reactor (PFR) or depending on the operating parameters is demonstrated.

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