Institute of Chemical Engineering

Modelowanie hydrodynamiki reaktora barbotażowego nowej konstrukcji

Publication date:	10.10.2024
Publication title:	Modelowanie hydrodynamiki reaktora barbotażowego nowej konstrukcji
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Journal information:	Przemysł Chemiczny

A CFD model of 1.5 m3 bubble reactor equipped with a slotted gas disperser used for deep desulfurization of SO2-rich gases was developed.The Eulerian model extended to 3 phases with standard k-ε turbulence model was used. Simulations of the hydrodynamics were made for different values of operating parameters. The validation of developed model was done by comparing the exp. and calc. values of the inlet gas pressure drop and the power of mixing. Anal. of the hydrodynamic phenomena in various areas of reactor confirmed good conditions for mixing the gas and liq. phases in the reactor with the modeled configuration. Such conditions favor effective absorption of SO2, which was found in experimental studies.

Metryczka

Published by:	Marek Tańczyk
Published at:	08.05.2026 13:31
Number of views:	18