Institute of Chemical Engineering

Effect of bed configuration and fluid properties on dispersion in solid foams

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The results of a study on axial dispersion in commercially available open cell metal (Nickelchromium) and ceramic (Vukopor A) foams with different pore density are presented. Residence time distributions were determined using tracer pulse experiments applying the convolution method to post process the recorded tracer concentration signals. The influence of liquid viscosity (water and 45 wt.% glycerol solution) and bed length (from 0.1 to 0.9 m) on axial dispersion was tested. It was found that fluid velocity, viscosity and foam morphology affected axial dispersion. Moreover, the axial dispersion coefficient for solid foams is lower than that of packed beds.

Metryczka

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