

Modelling of Particle Removal from a Circulating Etch Bath

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Abstract

A model has been developed to assist in the design of recirculating etch baths. The model predicts particle concentrations in a bath as a function of the flow characteristics of the bath, the types of filter and pump used, and the pressure drop characteristics of the system. The model shows that high flow rate and high filter particle retention efficiency are desirable for rapid bath cleanup. However, since the particle retention efficiency and pressure drop of filters are inversely related, selection of the optimum filter for a specific bath depends upon the size of the smallest particle which must be efficiently removed.