

ABSTRACT

Performance Estimation Method and Scale-Up Method for Particle Size Breakup Apparatus

A comprehensive mixer performance estimation method that can be applied to each of the mixers of the rotor-stator type having the various configurations and circulation modes is provided.

In accordance with the mixer performance estimation method of the present invention, the total energy dissipation rate ϵ_a for the mixers of the rotor-stator type may be obtained, the respective sizes of the rotor-stator and the powers and flow rates during the mixer's running time may be measured, the magnitude of the values for the configuration dependent term for the entire mixer that are specific to each of the mixers and are obtained by measuring the size of the rotor-stator and the powers and flow rates during the mixer's running time may be estimated, and the mixer's performance may be estimated.

Figure 1