There is a difference between Laminar and Turbulent flows and how you go about blending them to achieve homogeneity. Learn more about laminar and Difference Between Spargers in Gas/Liquid Dispersion. Should you use a ring sparger under the impeller blades to disperse gas or an open Fluid force amplification resulting from system dynamics of the mixer and tank configuration are addressed. This paper outlines the mechanical design procedure of a mixer based on the fluid forces that are imposed on the impellers by the fluid continuum in the mixing vessel. The analysis shows that the forces are a result of the asymmetries acting on the mixing impeller. These loads are dynamic and are transmitted from the impeller blades to the mixer shaft and gear reducer. Advances in Industrial Mixing: A Companion to the Handbook of Industrial Mixing. Suzanne M. Kresta. 5.0 out of 5 stars 1. Hardcover. $168.23. Scaleup and Design of Industrial Mixing Processes. Gary B. Tatterson. 3.1 out of 5 stars 6. See and discover other items: fluid chemical. There's a problem loading this menu right now. Learn more about Amazon Prime.
Fluid mixing can be a simple process, with every aspect of mixer performance easily evaluated. It can also be extremely complex, with many independent steps involving a variety of fluid phenomena. This report provides guidance for designing the more-readily definable processes, such as blending, solids suspension and heat transfer, and presents an up-to-date treatment of the more-complicated processes, entailing mass transfer, chemical reaction, and shear-rate sensitivity.