

Liquid Mixing and Processing in Stirred Tanks 1966 9780442351397 F. A. Holland, F. S. Chapman Reinhold Publishing Corporation, 1966

Comment PDF Processing & Handling. Liquid Mixing in Stirred Tanks. By David S. Dickey | August 1, 2019. A method of quantifying mixing according to a mixing index is presented. This index can evaluate and predict mixing intensity related to fluid velocities in stirred tanks The stirred tank is one of the most common and versatile pieces of chemical process equipment. A high-performance mixing and pumping skid system This company recently designed a new skid system (photo) capable of mixing and pumping low to moderately viscous products. This pilot-scale mixer has been redesigned The newly redesigned RS-02 high-shear pilot-scale mixer (photo) is well suited for pilot plants and small-scale production, including product development Liquid-liquid mixing is a key process in industries that is commonly accomplished in mechanical agitation systems. Liquid-liquid mixing performance in a stirred tank can be evaluated by various parameters, namely minimum agitation speed, mixing time, circulation time, power consumption, drop size distribution, breakup and coalescence, interfacial area, and phase inversion. The importance of these liquid-liquid mixing parameters, the measurement method, and the results are discussed briefly. Liquid-liquid mixing in a mechanically stirred vessel is a very common industrial operation encountered in many food, pharmaceutical, petrochemical, and biochemical industries. The main purpose of these processes is to promote good contact between the two immiscible phases and extend the interfacial area in order to increase the mass transfer rate. In these processes, it is important to operate at an agitation speed that ensures that the two phases are well mixed and the dispersed phase is completely incorporated into the continuous phase. Therefore, mixing and the operating parameters that control it play a key role in the optimization of the overall process. As a result, multiphase mixing has become a very active area of research and investigation.