

HYDRODYNAMICS IN GAS-LIQUID MEDIUM

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Gas-liquid system on a significant amount of technology in the food industry, microbiology, pharmaceutical and chemical industries. Cause and effect of a gas-liquid systems is the organization of mass and heat transfer processes, mechanical agitation in the interest of the technological process. Among the "hidden" and practically investigated potential gas-liquid atmospheric patterns, describing Henry's law.

Potential use of dissolved gases in liquid media refers to applications of technological devices with significant hydrostatic pressures-governmental media. According to Henry's law hydrostatic pressure must be accompanied by a concentration gradient of CO₂ in height units. This means the possibility of additional energy-material transformations in their energy supply.

Increased physical and hydrostatic pressures in the process equipment in which the synthesis of carbon dioxide or the forced flow and dispersion in the liquid phase means higher solubility according to Henry's law. In the fermentation media, as CO₂ is generated in them, paired pressure are common pressures. The latter have calculated the amount of pressure in the gas phase system and hydrostatic pressures. This means that, for example, such devices considerable height, as CCT brewing industry, solutions of carbon dioxide in height will be different, which gives rise to a concentration gradient tseentratsiynogo, especially in reduced vertical circulation. However, even with the existence of such a situation would be achieved by the proximity of the alignment of CO₂, but the physical basis of uneven distribution force disappears. This means that the formation of a dispersed gas phase adjustment devices will be different. The consequence of such a situation would be different speed transformation of CO₂ in the gas phase medium height and density of different dispersing bath gas phase. Given the phenomenological considerations should come to the conclusion that the density of the dispersed gas phase determines the hydrodynamic performance of gas-liquid systems, including those holding power to the gas phase, the absolute rate of ascent of gas bubbles as a sign of the Arhimed's force and the intensity of the circulation circuit. Additional impact on the latter have a cooling modes environments.

Completed technical developments on the use of the concentration of the potential in gas-liquid media.

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