

Abstract

The present invention discloses a gas-liquid bubbling bed reactor, comprising a liquid distributor, a gas distributor located below the liquid distributor, a catalyst bed layer and a catalyst support plate, and an optional interception screen, wherein the top of the reactor is provided with a gas outlet, the reactor is provided with a feed inlet connected to the liquid distributor, a gas inlet connected to the gas distributor, the bottom is provided with a discharge outlet. The present invention further provides a reaction system, which comprises the gas-liquid bubbling bed reactor as the main reactor and a sub-reactor. Through the system and the process of the present invention, the problems of the low conversion rate, the gas binding of the circulating pump, the unstable operation, the low yield of electronic-grade products, and the like in the carbonate synthesis process are solved purposely targetedly, and the present invention can be applied to related industrial production.

Figure 1