

Abstract

Natural circulation reactor and use

The invention relates to a reactor 1 for the continuous production of trioxane, which reactor has internally adjacently arranged evaporator elements 2, which comprises the evaporator elements 2 being at least two meters high to generate a thermosiphon flow and the clear cross section between the evaporator elements being 20 to 80% of the overall cross section.

The reactor is suitable in particular for the production of linear or cyclic acetals, in particular trioxane, dioxolane, tetraoxane, dimethoxymethane, diethoxymethane, diethoxyethane and dibutoxyethane.

Using the reactor, circulation ratios of up to 250 can be achieved, the reliability and availability of the production plant being increased at the same time as the susceptibility to breakdown decreases.

Figure 2