

Abstract

A reactor (1) having a vertical longitudinal axis and an inlet (2) for a liquid or liquid/solid feed stream in the upper region of the reactor and an inlet (3) for a gaseous stream in the lower region of the reactor (1), characterized by

- at least two chambers (4) arranged above one another in the longitudinal direction, where
- the chambers (4) are separated from one another by liquid-tight bottom plates,
- each chamber is connected via a liquid overflow (6) to the chamber (4) located immediately underneath and a liquid product stream is taken off via the liquid overflow (6) of the bottommost chamber (4),
- the gas space (7) above the liquid surface in each chamber (4) is connected to the chamber (4) located immediately above it by one or more guide tubes (8) which opens (each open) into a gas distributor (9) provided with openings for exit of gas below the liquid surface,
- and each chamber is provided with at least one guide plate (12) which is arranged vertically around each siphon like gas distributor (9) and whose upper end is below the liquid surface and whose lower end is above the liquid-tight bottom plate (5) of the chamber (4) and which divides each chamber (4) into one or more spaces into which gas flows (13) and one or more spaces into which gas does not flow (14),

is used for gas/liquid or gas/liquid/solid reactions.

(Fig. 1)



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