

Jet Loop Reactor Having Nanofiltration

Abstract

5 The invention relates to a device for the continuous, homogeneous-catalysis
reaction of a liquid with a gas and optionally an additional fluid, wherein the
device comprises at least one reactor having an external liquid circulation driven
by a pump, and wherein the device has at least one membrane separation
stage that preferably holds back the homogeneous catalyst. The aim of the
10 invention is to specify a device that allows homogeneous-catalysis gas/liquid
phase reactions, in particular hydroformylations, which operate with membrane
separation of the catalyst to be performed economically at an industrially
relevant scale. Said aim is achieved in that a jet loop reactor is provided as the
reactor, and that the pump and the membrane separation stage are arranged in
15 the same external liquid circuit.

(Fig. 1)