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(54) Title: POLYMERISATION PROCESS

(57) Abstract

The present invention relates to a continuous gas fluidised bed process for the polymerisation of olefin monomer(s) wherein the recycled gaseous stream withdrawn from the reactor is divided into two streams (A and B) and that (a) a first stream (A) having been cooled to a temperature at which liquid condenses out is then reintroduced directly into the fluidised bed in the reactor in such a way that, at any time, said condensed liquid is continuously introduced into said bed at a minimum rate of 10 litres of liquid per cubic metre of fluidised bed material per hour, and (b) a second stream (B), which by-passes the above cooling/condensing step, is passed through an exchanger and is then reintroduced into the reactor. The continuous introduction of a liquid into the reactor reduces or even eliminates fouling problems which can be encountered in conventional gas phase olefin polymerisation processes.

