

ABSTRACT

A gas distributor plate provided in a fluidized bed polymerization vessel which effects the gas phase polymerization of olefins, the gas distributor plate exhibiting excellent action for uniformly diffusing the gas flow in the fluidized bed zone. A gas distributor plate has a number of gas passage holes and is provided in a fluidized bed polymerization vessel which effects the gas phase polymerization of olefins, wherein when the inner radius of the straight drum portion of the polymerization vessel is denoted by 1, the holes perforated in the outer peripheral portion of the distributor plate at 0.7 to 1.0 from the center of the straight drum portion have an average diameter which is larger than the average diameter of the holes perforated in the inner peripheral portion of the distributor plate at smaller than 0.7 from said center. This makes it possible to uniformly and stably diffuse the gas flow in the fluidized bed zone in the polymerization vessel, to effectively prevent the formation of a dead zone, as well as to effectively prevent the polymer from adhering onto the wall surfaces of the polymerization vessel.

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