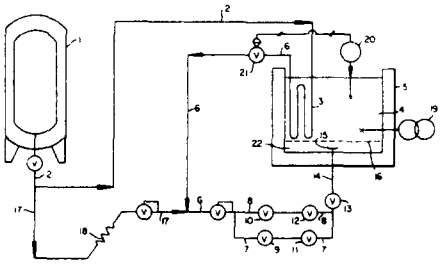
by the flow of the reactor coolant through the column. The control column is divided into three basic sections wherein each of the sections has a different cross-sectional area. The uppermost section of the control column has the greatest cross-sectional area, the intermediate section of the control column has the smallest cross-sectional area, and the lowermost section of the control column has the intermediate cross-sectional area. In this manner, the area of the uppermost section can be established such that when the reactor coolant is flowing under normal conditions therethrough, the absorber balls will be lifted and suspended in a fluidized bed manner in the upper section. However, when the reactor coolant flow falls below a predetermined value, the absorber balls will fall through the intermediate section and into the lowermost section, thereby reducing the reactivity of the reactor core and shutting down the reactor.

4343634

PROCESS FOR OPERATING A FLUIDIZED BED

Robert B Davis; assigned to Union Carbide Corporation

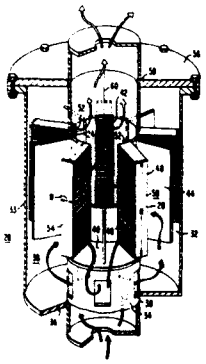


In a process for operating a fluidized bed, wherein the bed particles have a Reynolds number of less than 20, at a predetermined cryogenic termperature comprising (i) bringing a cryogenic fluid into indirect contact with the bed; (ii) permitting the fluid to vaporize at the area of indirect contact whereby the bed is cooled; and (iii) utilizing the vapor from step (ii) to fluidize, and further cool, the bed, said cooling in steps (ii) or (iii) being from ambient temperature to the predetermined cryogenic temperature, the improvement comprising changing, continuously or stepwise, the minimum fluidizing mass accordance with a specified equation.

4343631

HOT GAS PARTICULATE REMOVAL

David F. Ciliberti; assigned to Westinghouse Electric Corp



Filtration system configurations particularly useful for cleaning high temperature raw gas containing fine particulates such as that discharged from coal gasification and fluidized bed combustion processes. Thin filter elements, having elongated clean channels on one side of a gas permeable ceramic membrane and shorter dirty channels on the other side, extend radially outward from a central duct. Raw gas flows about and through the filter elements, and clean gas which permeates the membrane enters the duct. The elements are cleaned by a back pulse of clean air, spitting the particulates to the bottom of the containing vessel and through an outlet. A high density filter packing within a containing pressure vessel is achieved by nesting a plurality of the duct and filter element modules, or through other orientations and filter element configurations.