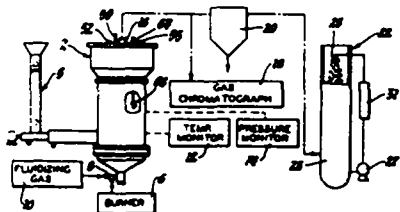


retrofit of existing boilers for burning of low grade inexpensive solid fuels. The operating discharge gas from a fluidized bed combustor is substantially lower in temperature from what exists at the furnace gas outlet of a conventional steam generator. Thus, outlet gas from fluidized bed combustors needs to be placed in the downstream gas path differently from conventional practice. The external combustors of the present invention permit placement of hot gas in the steam generator gas path where it can be effectively utilized. The invention also teaches how new steam generators can be configured advantageously to accommodate multiple fluidized bed combustors particularly as pertains to larger capacity steam generators in the 200 MW electrical and larger range.

4423688

BRUSH FEEDER FOR DISPOSAL OF THERMOPLASTIC WASTE IN A FLUIDIZED BED REACTOR

Hong-Hsiang Kuo assigned to General Motors Corporation

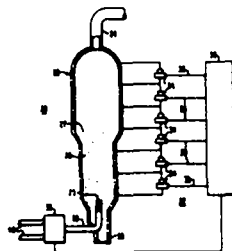


In accordance with the invention, a means and method are provided for continuously delivering thermoplastic particles to an operating fluidized bed reactor in which they are thermally degraded. Conveyor systems of the type used to feed non-melttable feedstocks to fluidized bed reactors were found to be unsuitable for the application. Accordingly, a novel device was developed in which polymer particles are conveyed to a reactor in a specialized feed tube. The tube features a brush-screw auger-type feeder and a source of pressurized gas to agitate the particles therein and prevent backflow of hot reactor fluids.

4421523

CONTROL OF BED HEIGHT IN A FLUIDIZED BED GASIFICATION SYSTEM

Gautam I Mehta, Lynn M Rogers assigned to The United States of America as represented by the Department of Energy

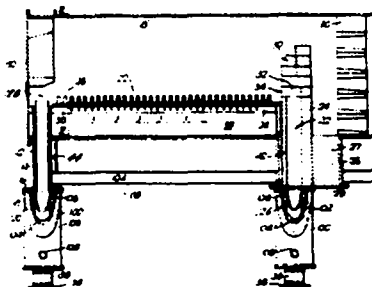


In a fluidized bed apparatus a method for controlling the height of the fluidized bed, taking into account variations in the density of the bed. The method comprises taking simultaneous differential pressure measurements at different vertical elevations within the vessel, averaging the differential pressures, determining an average fluidized bed density, then periodically calculating a weighting factor. The weighting factor is used in the determination of the actual bed height which is used in controlling the fluidizing means.

4421063

FLUIDIZED BED COMBUSTION APPARATUS

Ronald B Stuart, Alan G Troup, Dalbeattie, United Kingdom assigned to Northern Engineering Industries plc



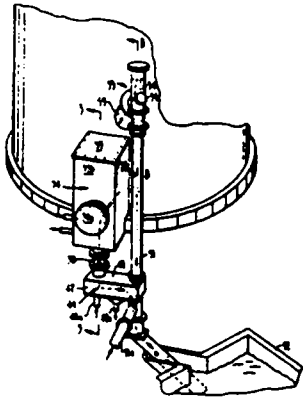
A boiler or other fluidized bed apparatus has an outlet from the bed and an outlet from the gas stream downstream of the bed for removing

material from the bed and from the gas stream. The material removed is passed to screening mechanism which separates materials into relatively larger particles and relatively smaller particles. The smaller particles are fed by conveyor to means feeding the bed. The larger particles are mainly ash which is discarded. Removal of material from the bed under load is provided for.

4421038

METHOD AND APPARATUS FOR REMOVING FOREIGN OBJECTS FROM FLUID BED SYSTEMS

Gary O Goldbach, Michael A O'Hagan assigned to Combustion Power Company Inc

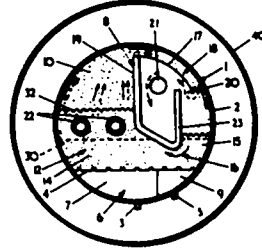


A foreign object removal system is disclosed including a removal chamber projecting laterally from the combustion chamber of a fluid bed reactor and connected via a downwardly directed pipe to a material flow control plenum chamber which includes means for fluidizing the mixture of inert fluid bed particles and foreign objects at the bottom of the pipe for lateral movement into an air classifier wherein the foreign objects are dropped to a collection tank and the fluid bed particles are carried upwardly by a stream of classifying air to a deentrainment chamber where their velocity is reduced and they are returned to the combustion chamber.

4419966

FLUIDIZED BED COMBUSTION

Francis J Jenkins, Michael J Jenkins, Wolverhampton, United Kingdom assigned to EMS Thermpant Limited

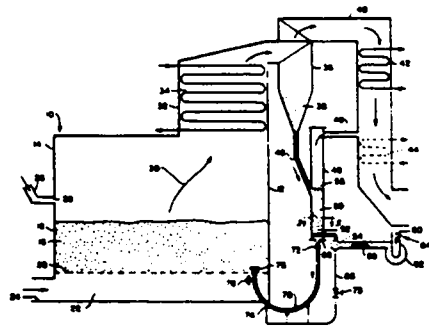


A fluidized combustion bed is divided by a hollow baffle into two regions which are fluidized at respectively higher and lower fluidizing velocities. Exhaust gases and elutriated particles leaving the larger region pass into the freeboard and around the baffle, the particles being deposited after such passage into the smaller region and the gases flowing into the baffle for exhaust.

4419965

FLUIDIZED REINJECTION OF CARRYOVER IN A FLUIDIZED BED COMBUSTOR

Juan Garcia-Mallol, Michael G Alliston assigned to Foster Wheeler Energy Corporation



A system for the fluidized reinjection of fine particles (carryover) into a fluidized bed combustor. The carryover recirculation system includes a fluidized reinjection bed which is fluidized using