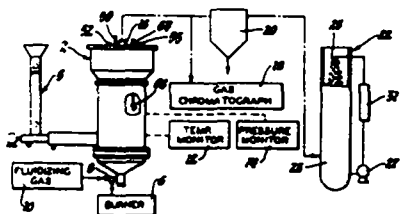


retrofit of existing boilers for burning of low grade inexpensive solid fuels. The operating discharge gas from a fluidized bed combustor is substantially lower in temperature from what exists at the furnace gas outlet of a conventional steam generator. Thus, outlet gas from fluidized bed combustors 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

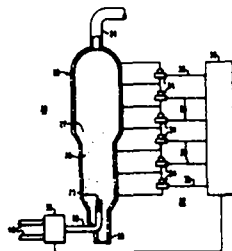


In accordance with the invention, a means and method are provided for continuously delivering thermoplastic particles to an operating fluidized bed reactor in which they are thermally degraded. Conveyor systems of the type used to feed non-melttable feedstocks to fluidized bed reactors were found to 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

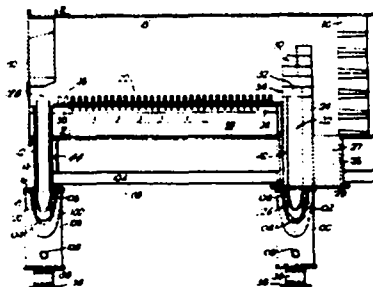


In a fluidized bed apparatus a method for controlling the height of the fluidized bed, taking into account variations in the density of the bed. The method comprises taking simultaneous differential pressure measurements at different vertical elevations within the vessel, averaging the differential pressures, 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