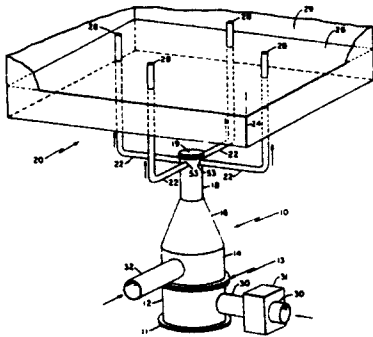


A loose fitting movable cover plate (36), suitable for the severe service encountered in a fluidized bed combustor (10), restricts the flow of solids into the combustor drain lines (30) during shutdown of the bed. This cover makes it possible to empty spent solids from the bed drain lines which would otherwise plug the piping between the drain and the downstream metering device. This enables use of multiple drain lines each with a separate metering device for the control of solids flow rate.

4356779

FLUIDIZED BED SOLIDS FEED

James H Porter; Robert Davis; Jehangi Zakaria assigned to Energy Resources Company Inc

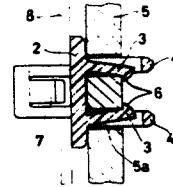


A fluidized-bed system for feeding coal or a coal-limestone mixture into a fluidized bed combustor, a perforated horizontal distributor plate dividing the chamber into upper and lower chamber sections, means for feeding solid fuel particles into the upper chamber section, a source of high velocity gas connected to the lower chamber section and passing through the plate into the upper chamber section for entraining the particles, means for heating the high velocity gas before it is introduced into the upper chamber, an entrainment section defined by converging upper sides of said fuel feeding chamber, and a stream splitting section disposed above said entrainment section and connected to a plurality of pneumatic transport lines each penetrating the distributor plate of a fluidized bed combustor and terminating in an outlet feedport.

4355601

RECIRCULATING FLUE GAS FLUIDIZED BED HEATER

Uday S Hattiangadi assigned to Conoco Inc



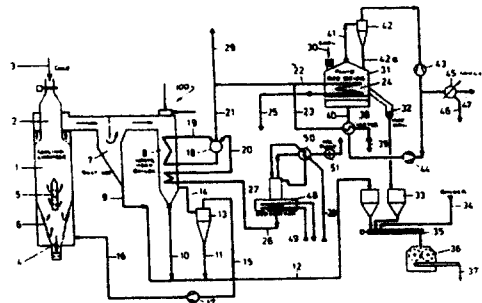
A fluidized bed boiler system and a manner of operating the same is provided wherein a fluidized particulate bed in which solids are not recycled is utilized. High temperature flue gas is directed to a boiler means. A portion of both the high temperature and a low temperature gas stream are recycled to a fluidizing gas stream for fluidizing the particulate bed.

4354903

PROCESS FOR DRYING AND PREHEATING COAL UTILIZING HEAT IN DRY COOLING OR QUENCHING OF COKE

Heinric Weber; Kurt Lorenz; Horst Dungs assigned to Firma Carl Still GmbH & Co KG

A three-cycle process as disclosed for drying and preheating coking coal using the



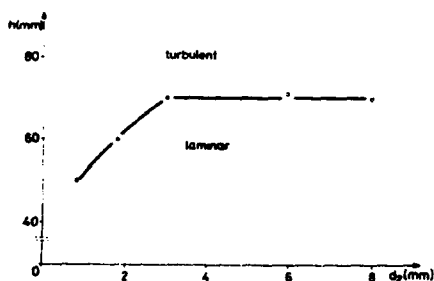
heat from cooled coke. Cooling gas is passed over hot coke to heat the cooling gas and cool the coke. The heated cooling gas is then passed through a waste heat

boiler and then back to the hot coke in a coke cooling chamber. This completes the first closed cycle. Water is supplied to the waste heat boiler to form steam. The steam is supplied to a fluidized bed of wet coal to indirectly preheat and dry the wet coal in a second cycle. The wet coal is fluidized using fluidizing gas which converts water in the wet coal into steam. Some of the steam is condensed from the combination of fluidizing gas plus steam and then the fluidizing gas is returned to the bed. Steam from the waste heat boiler is also supplied to the fluidizing gas before it re-enters the bed to heat the fluidizing gas.

4354635

FLUIDIZED-BED REACTOR WITH OPEN REACTION GAS INPUT AND METHOD OF INCREASING THE DUCT

Eike Barnert; Wolfgan Frommelt; Erich Zimmer assigned to Kernforschungs-anlage Julich GmbH



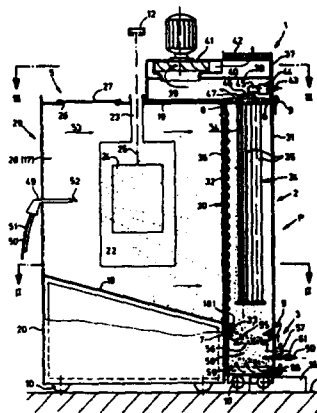
The reaction gas throughout of the supply duct feeding gas to the bottom of a fluidized bed reactor of the kind shown in U. S. Pat. No. 4,153,004, issued May 8, 1979, is increased by providing the reaction gas supply tube in the form of a bundle of tubes of small cross-section of about 2 mm diameter. Subdivision of the supply tube into hexagonal ducts in honeycomb arrangement maximizes the useful cross-sectional area of the supply tube. With the smaller elemental tube diameters, a higher rate of flow is maintainable without loss of laminar flow behavior, which behavior is maintained in the jet issuing from the subdivided reaction gas supply duct as it flows towards the constricted entrance into the fluidized

bed container while being surrounded by a sheath of inert carrier gas supplied by an annular duct surrounding the reaction gas tube. It is thus possible to increase the input of reaction gas without increasing the diameter of the jet or loss of the laminar flow characteristics necessary to prevent the reaction gas from making deposits that would interfere with the introduction of gas into the bottom of the bed.

4354451

DEVICE FOR SPRAY-COATING A WORKPIECE WITH POWDER PARTICLES

Gerhard F Vohringer; Gerhard Hestermann assigned to ESB Elektrostatische Spruh- und Beschichtungsanlagen G F Vohringer GmbH



A booth forming a spraying chamber for workpieces to be coated with powder particles has a substantial fully open front side, giving access to an electrostatic spray gun, and a substantially fully open rear side adjoining a housing of a detachable powder-collecting unit which is open toward the chamber while being separated therefrom by an apertured screen. Tubular filter elements in the housing of the powder-collecting unit, having air-permeable peripheral surfaces, communicate with the suction end of a blower in an overlying clean-air unit, thereby giving rise to an air stream which passes generally horizontally through the chamber from its front side to its rear side and entrains particles discharged by the spray gun. Particles bypassing the workpiece to be coated may traverse the apertured