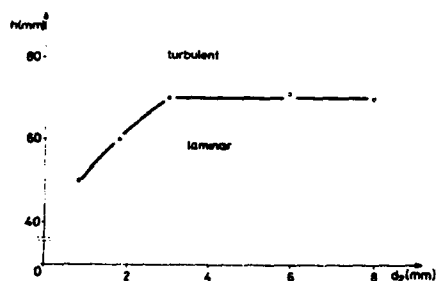


boiler and then back to the hot coke in a coke cooling chamber. This completes the first closed cycle. Water is supplied to the waste heat boiler to form steam. The steam is supplied to a fluidized bed of wet coal to indirectly preheat and dry the wet coal in a second cycle. The wet coal is fluidized 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 Kernforschungsanlage Julich GmbH



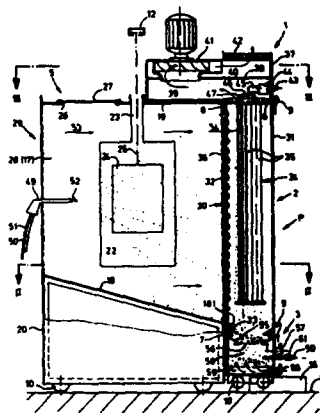
The reaction gas throughout of the supply duct feeding gas to the bottom of a fluidized bed reactor of the kind shown in U. S. Pat. No. 4,153,004, issued May 8, 1979, is increased by providing the reaction gas supply tube in the form of a bundle of tubes of small cross-section of about 2 mm diameter. 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



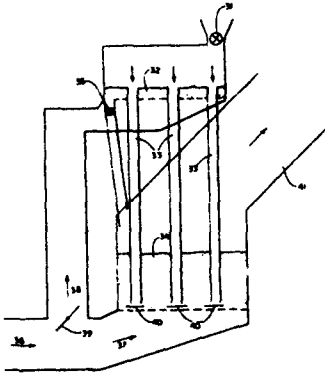
A booth forming a spraying chamber for workpieces to be coated with powder particles has a substantial fully open front side, giving access to an electrostatic spray gun, and a substantially fully open rear side adjoining a housing of a detachable powder-collecting unit which is open toward the chamber 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

screen and cling to the surfaces of the filter elements from which they may be intermittently dislodged by an air blast directed into these elements from the clean-air unit. The dislodged particles fall into a recovery compartment of the housing which lies below the level of the chamber bottom, this bottom sloping down toward the recovery compartment where-by particles dropping to the chamber floor can slide directly into that compartment underneath the apertured screen. A flexible conduit connects the recovery compartment with the spray gun for recirculation of the particles which, after passing through a strainer, are reconditioned by a fluidized bed in the recovery compartment. Cutouts in the sidewalls and a slot in the roof of the booth enable the introduction and withdrawal of workpieces suspended from above.

4354439

METHOD OF AND A DEVICE FOR FEEDING SOLID FUEL IN A FLUIDIZED BED HEARTH

Fritz Baunack assigned to Babcock-BSH AG vormals Buttner-Schilde-Haas AG



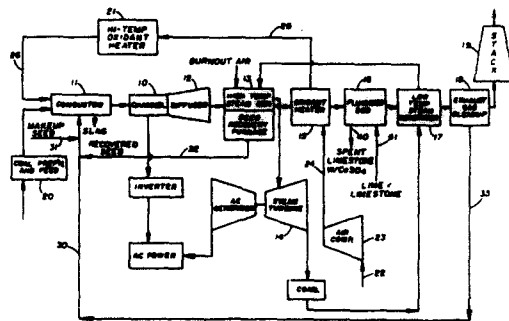
In the method of feeding pulverized solid fuels into a fluidized bed hearth, the granular solid fuel is first delivered into a fuel distributing space where it is fluidized by means of a whirling stream of air and the fine granular components of the fluidized fuel are pneumatically fed through an array of feeding pipes into the fluidized bed formed in the combustion space of the hearth. The device for performing the method includes heat-resistant feeding pipes uniformly distributed between the

combustion space and projecting into the fuel distributing space to immerse into the fuel distributing fluidized bed of fuel. The fluidizing air of stream is introduced into the distributing chamber to act both as the fuel conveying medium and as a combustion air in the combustion space.

4354354

SYSTEM FOR RECOVERY OF SULFUR DIOXIDE IN AN MHD POWER PLANT

Stanley Wysk; James Clark assigned to Combustion Engineering Inc

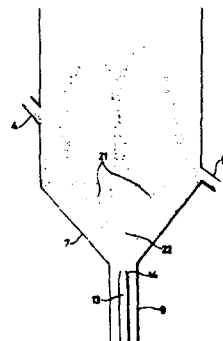


The seed, in the form of K_2SO_4 , is fed into an MHD combustor, mechanically recovered, and recycled. Sulfur dioxide in the discharge of the MHD channel is recovered downstream by a fluidized bed of lime/limestone.

4353730

GRANULATING PROCESS

Bunji Kinno; Hiroshi Hirayama; Tetsuzo Honda assigned to Toyo Engineering Corporation; Mitsui Toatsu Chemicals Incorporate



In the method of granulating solid fuels into a fluidized bed hearth, the granular solid fuel is first delivered into a fuel distributing space where it is fluidized by means of a whirling stream of air and the fine granular components of the fluidized fuel are pneumatically fed through an array of feeding pipes into the fluidized bed formed in the combustion space of the hearth. The device for performing the method includes heat-resistant feeding pipes uniformly distributed between the