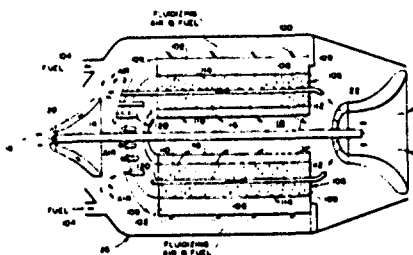


flow regulation necessary for even fluidization above the slope plate. To make investment casting molds, a gravity rainsander device is coupled with a fluidized bed. When slurry used in the mold making process drips from a pattern it falls into the fluidized bed thereby converting the errant drops into particulate balls which are conveniently removed.

4338781

ROTATING FLUIDIZED BED COMBUSTOR

William H. Belke; George Grim; assigned to Caterpillar Tractor Co.

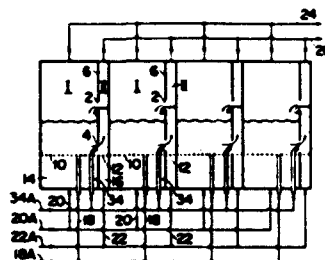


A rotating fluidized bed combustor particularly adaptable for mounting on conventional gas turbine engines comprising an annular fluidized bed, defined by inner and outer spaced apart coaxial, cylindrical, perforated walls, which rotates about the longitudinal axis of the cylinders. Compressed air and solid or liquid fuel enter the bed through the outer perforated wall and fluidize the bed. The air reacts with the fuel within the bed to produce hot combustion gas which exits the bed together with unreacted compressed air, through the inner perforated wall. When employed with gas turbine engines, the gases exiting the bed are directed into the guide vanes of the gasifier turbine. Cooling tubes pass substantially longitudinally through the rotating fluidized bed and compressed air is directed through the tubes to absorb combustion heat from the bed.

4338283

FLUIDIZED BED COMBUSTOR

Koya Sakamoto; Yutaka Yoneda; Naoki Fujiwara; Shigehito Takamoto; assigned to Babcock Hitachi Kabushiki Kaisha

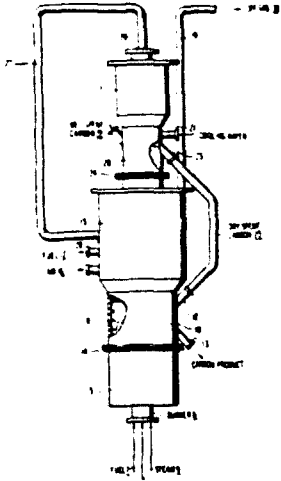


A fluidized bed combustor wherein a combustion chamber and a regeneration chamber are both contained in a single hollow body is provided. These two chambers are formed by vertically partitioning the body by a partition wall, which has an upper opening and a lower one, and also each have a perforated plate at the bottom part thereof on which a heat transfer medium containing a desulfurizing agent is placed and fluidized. The desulfurizing agent is transferred from the combustion chamber through the lower opening to the regeneration chamber and circulated by overflow through the upper opening again to the combustion chamber. Various modifications of the above-mentioned fundamental embodiment are proposed. Combustion and desulfurization are automatically and effectively carried out in make an apparatus to give a high percentage desulfurization, make an apparatus compact, and reduce an initial cost and a running cost thereof.

4338198

TWO STAGE FLUID BED REGENERATION OF SPENT CARBON

George N. Brown; assigned to Westvaco Corporation

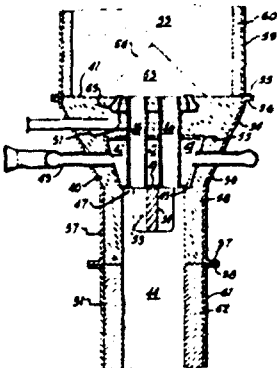


Improved method and apparatus are disclosed for regenerating wet spent carbon containing volatile impurities wherein the wet spent carbon is dried in a drying zone utilizing incinerated reactivation zone gaseous effluent. The improvement of the invention provides that the portion of reactivation zone gaseous effluent used to dry the wet spent carbon in the drying zone is continuously recycled to the reactivation zone for incineration to remove any volatile impurities which may have been removed from the wet spent carbon during drying. The balance of the reactivation zone gaseous effluent may be discharged into the atmosphere without further incineration.

4338187

SOLIDS FEEDING DEVICE AND SYSTEM

Robert Gartside; Herman Woebcke; assigned to Stone & Webster Engineering Corporation

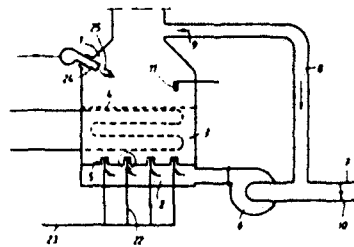


An apparatus and process for delivering fluidization gas to a bed of particulate solids to selectively locally fluidize the solids above a delivery conduit in communication with a reaction chamber. Also an apparatus and process for intimately mixing hydrocarbon feed with the particulate solids at the end of the delivery conduit in the reaction chamber.

4338074

FLUIDIZED BED COMBUSTION CHAMBERS

Lars-Goran Johansson; assigned to Stal-Laval Turbin AB



An assembly and method for heating a fluidized bed combustion chamber to ignition temperature, wherein a heated gas flows through heat exchange tubes extending into the fluidized bed to provide sufficient heat for raising the temperature of the bed material and the combustion air to allow for ignition of the combustion fuel. A conduit system is provided for selectively recycling combustion air through the combustion chamber during the ignition process.

4337143

PROCESS FOR OBTAINING PRODUCTS FROM TAR SAND

Francis V. Hanson; Jan Miller; Ales Oblad; assigned to University of Utah