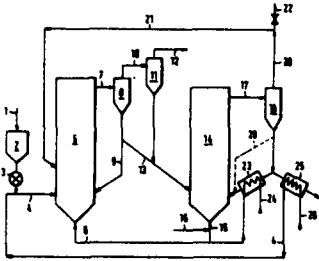


4347064

PROCESS OF GASIFYING FINE-GRAINED SOLID FUELS

Lotha Reh; Martin Hirsch; Gerhard Baron; Eberhard Blaum; Carl Hafke assigned Metallgesellschaft Aktiengesellschaft



A process of gasifying fine-grained solid fuels for the production of a product gas that contains hydrogen, carbon oxides and methane comprises a treatment with steam, oxygen and/or carbon dioxide in two interconnected gasifying stages under a pressure in the range from 2 to 150 bars and at temperatures of 500 degrees to 1500 degrees C. In the first gasifying stage, the fuel is gasified in a circulating fluidized bed by a treatment with gasifying stage. The residual solids which become available in the first gasifying stage are fed to the second gasifying stage and are virtually completely gasified therein, except for residual ash, by a treatment with a gasifying agent which includes oxygen. At least one-half of the product gas from the second gasifying stage is fed to the first gasifying stage and used as fluidizing fluid therein.

4346064

DECONTAMINATION OF COMBUSTION GASES IN FLUIDIZED BED INCINERATORS

Albert M. Leon; Assigned to Dorr-Oliver Incorporated

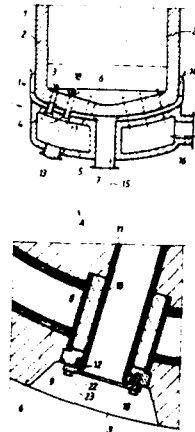
Sulfur-containing atmospheric pollutants are effectively removed from exit gas

streams produced in fluidized bed combustion system by providing a fluidized bed of particulate material, i.e. limestone and/or dolomite wherein a concentration gradient is maintained in the vertical direction. Countercurrent contacting between upwardly directed sulfur containing combustion gases and descending sorbent particulate material creates a concentration gradient across the vertical extent of the bed characterized in progressively decreasing sulfur contents contact correspondingly atmospheres having progressively increasing concentrations of calcium oxide thus assuring optimum sulfur removal.

4346054

FLUIDIZABLE BED APPARATUS

Lars Lofgren; Autur Ostlund; Assigned to Stal-Laval Apparat AB



A fluidizable bed apparatus comprises a container containing a bed of fluidizable particulate material which becomes hot in use. The apparatus is characterized in that it includes at least one passage for the flow of cooling medium therethrough arranged beneath a bottom wall of the container. The or each passage has communicating therewith at least one inlet, preferably arranged adjacent side walls of the container. Nozzles for supplying fluidizing medium to the container for fluidizing the bed are arranged to pass through the bottom wall of the container.