



Apparatus for Sequestering Flue Gas CO₂

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Description of Technology

This invention is a fluidized bed reactor device for sequestering flue gas CO₂ from a flue gas source. The fluidized bed reactor device comprises an operating portion having a first and second end. A flue gas inlet is formed at the first end of the operating portion within the flue gas inlet receiving flue gas from the gas source. A flue gas outlet is formed at the second end of the operating portion. A volume of fly ash is encased within the operating portion between the second end and a distributor plate with the flue gas traveling through the distributor plate and the fly ash creating reacted flue gas wherein the reacted flue gas exits the operating portion through the flue gas outlet.

Applications

This technology can be used in facilities that burn fossil fuels, such as coal, to produce electricity. These facilities create by-products including flue gases (e.g., SOX and NOX) and solid waste (e.g., fly ash). By using this technology, these facilities can reduce the environmental impact of these by-products to fall within the restrictions set forth by the New Clean Air Act enacted by Congress.

Features & Benefits

The fluidized-bed reactor is environmentally safe and is a stable process. The principle feature of this reactor process is in-plant use of CO₂ for both reducing flue gas CO₂ emissions and stabilizing alkaline ash.

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