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Fluidized-Bed Combustion Reduces Atmospheric Pollutants

Fluidized-bed combustion is a promising method of reducing the quantity of atmospheric pollutants (oxides of sulfur and nitrogen) released during the combustion of fossil fuels. Fuel is burned in a fluidized bed of solids with simultaneous feeding of crushed or pulverized limestone to control sulfur dioxide emission. In addition, the process offers high heat transfer rates, efficient contacting for gas-solids reactions, and lower nitrogen oxide emission since combustion is carried out at lower temperatures than conventional methods.

This review is especially important in view of more stringent criteria in the proposed air pollution standards. By mid-1975, emission control techniques must be adopted to keep sulfur oxide concentrations below 0.14 ppm on any one day, and below 0.03 ppm on a yearly average. Standards for nitrogen oxide have been set at 0.05 ppm, annual arithmetic average.

This review should be of interest to companies doing research in the area of fluidized-bed combustion, companies engaged in the manufacture of sulfuric and nitric acids and air pollution control agencies.

Notes:

1. The following documentation may be obtained from:
National Technical Information Service
Springfield, Virginia 22151
Single document price: \$3.00
(or microfiche \$0.95)

Reference: ANL/ES-CEN-1002, Reduction of Atmospheric Pollution by the Application of Fluidized-Bed Combustion

2. Technical questions may be directed to:
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U.S. Atomic Energy Commission
Washington, D.C. 20545
Reference: TSP72-10431

Patent status:

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