AEC-NASA TECH BRIEF

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:
   Mr. Glenn K. Ellis
   Technology Utilization Officer
   Office of Information Services
   U.S. Atomic Energy Commission
   Washington, D.C. 20545
   Reference: TSP72-10431

Patent status:

Inquiries concerning rights for commerical use of this information may be made to:
Mr. George H. Lee, Chief
Chicago Patent Group
U.S. Atomic Energy Commission
Chicago Operations Office
9800 South Cass Avenue
Argonne, Illinois 60439

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