particles is measured. The ratio of the two pressure drops represents the ratio of the fluid velocity and minimum fluidizing velocity under the operating conditions and can be used as control factor.

### 4335785

# APPARATUS AND METHOD FOR CONTROLLING HEAT TRANSFER BETWEEN A FLUIDIZED BED AND TUBES IMMERSED THEREIN

James L. Hodge; Anthony E. Cerkanowicz



In a fluidized bed of solid particles having one or more heat between the fluidized particles and a fluid flowing through the immersed heat exchange tubes is controlled by rotating an arcuate shield apparatus about each tube to selectively expose various portions of the tube to the fluidized particles.

### 4335683

# FLUIDIZED BED HEAT EXCHANGER WITH CONTROL TO RESPOND TO CHANGES IN DEMAND

Robert L. Criswell; Michael C. Polagye; assigned to Foster Wheeler Energy Corporation

In a fluidized boiler system, the rate of fuel flow and bed depth are simultaneously controlled in response to variations in a



load demand signal representing the need for steam output from the system. When the load demand changes, the rate of fuel flow is varied accordingly to provide a change in the bed temperature to thus provide a rapid response to the change in the demand signal. At the same time, the system changes the rate of flow of limestone to the bed and the rate of removal of spent particulate material of the bed to change the bed depth to respond more slowly to the change in the demand signal. As the depth of the fluidized bed approaches a value corresponding to the demand signal, the temperature of the bed will change back toward a median value.

#### 4335662

## SOLID FUEL FEED SYSTEM FOR A FLUIDIZED BED

Brian Jones; assigned to Combustion Engineering Inc.