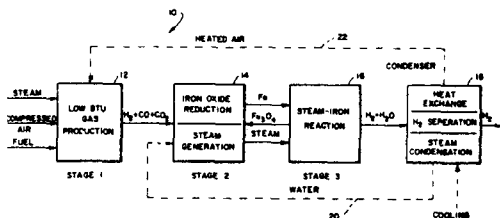


4343624

ROTATING FLUIDIZED BED HYDROGEN PRODUCTION SYSTEM

William Belke; George B. Grim; assigned to Caterpillar Tractor Co.



A three stage hydrogen generator, comprises a low BTU, carbon monoxide and hydrogen containing gas generation stage, a first reactor stage for exothermically reducing ferric oxide with the low BTU gas and for generating superheated steam and a second reactor stage for endothermically reacting steam and iron to produce substantially pure hydrogen gas. The hydrogen gas together with unreacted steam from the third stage is directed to a condenser, preferably an air cooled unit, wherein the steam is condensed and the hydrogen gas recovered. The condensate is cycled back to the second reactor as the feed water for generating superheated steam and the heated cooling air is directed to the first stage for use in the generation of the low BTU gas. At least one, and preferably all, of the stages utilize a rotating fluidized bed. Desirably the condenser is a rotating fluidized bed heat exchanger.

4343622

METHOD OF MAKING GRANULES BUILT UP FROM A CORE AND AN ENVELOPE

Jean P. Bruynseels; assigned to Compagnie Neerlandaise de l'Azote

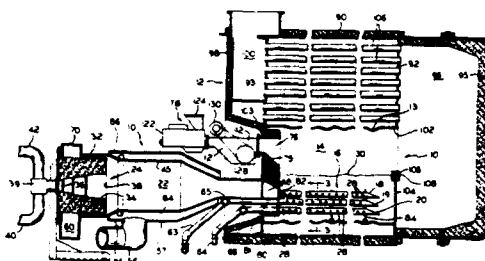
Manufacture of granules built up from a core and an envelope in a fluidized bed of nuclei. A stream of liquid containing the

enveloping material is hydraulically sprayed within the bed from the bottom upwards by means of at least one hydraulic sprayer surrounded by a coaxial, annular, converging aperture through which auxiliary gas is discharged at such a vertical velocity that the conical stream of droplets is narrowed to a stream having an apex angle of less than 20 degrees, and in such a quantity that a cavity of dilute fluidized phase is formed above each sprayer, which cavity is located entirely within the bed.

4343247

FLUIDIZED BED COMBUSTION METHOD AND APPARATUS

Robert A. Chronowski; assigned to Aqua-Chem Inc.



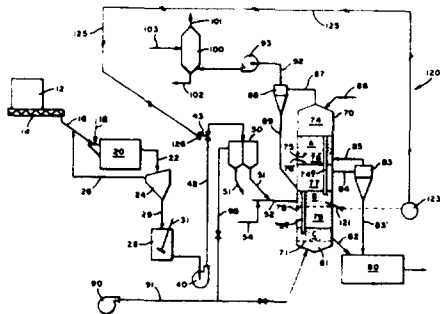
A fluidized bed combustion device adapted for use with a boiler has an air distributor consisting of a plurality of rows of generally horizontally oriented, apertured sparge pipes disposed in a bed of inert particulate material. The rows of pipes are vertically spaced apart with the upper row being connected to a start-up burner for receiving heated combustion products and excess air and the lower rows of pipes are connected to selectively receive air or inert gases through a separate delivery path. During start-up and low load conditions, only the upper row of pipes is pressurized and so that only the upper portion of the bed is fluidized to minimize the heat input requirements. Once the upper portion of the bed has been heated to the required temperature, primary fuel is delivered to sustain combustion without the start-up burner. At

the completion of the start-up process and during high fire conditions all of the rows of tubes are pressurized to provide a deeper bed of fluidized material.

4343246

SLURRY COAL FEED SYSTEM FOR FLUIDIZED BED REACTOR

Walfred W. Jukkola; Thomas D. Heath;
assigned to Dorr-Oliver Incorporated

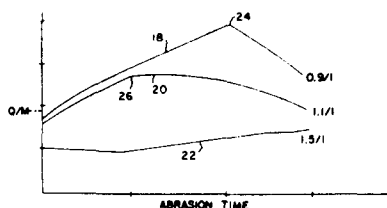


A system for the comminution of coal, slurry formation and feed of the coal slurry to a fluidized bed reactor.

4342824

DEVELOPER WITH COATED CARRIER MATERIAL AND METHOD OF MAKING

Douglas Campbell; assigned to Imaging
Systems Corporation



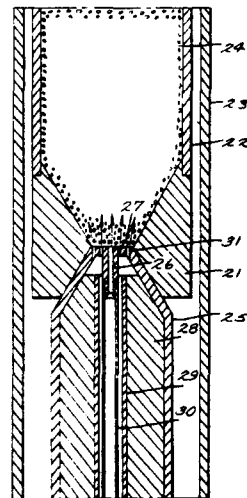
Disclosed herein is a developer with a flowable coated carrier for use in electrophotographic recordings. The carrier is coated with a solution formed by reacting a polyfunctional polyisocyanate with hydroxy containing polymers in the presence of a catalyst. The reaction occurs with a

range of 1.4 to 1.55 parts polyfunctional polyisocyanate to one part of the hydroxy containing polymer. A fluid bed process is used to coat the carrier by cycling the carrier material thru a spray of the solution until a desired coating thickness is achieved and then the material is heat cured. The carrier is coated with an aliphatic aromatic cross-linked resin having a longer useful life and better triboelectric stability.

4342284

PROCESS FOR THE COATING OF PARTICLES FOR THE PRODUCTION OF FUEL AND/OR ABSORBING ELEMENTS FOR NUCLEAR REACTORS AND APPARATUS THEREFOR

Harald Loser; Gerhard Schmidt; Wolf-
gang Warzawa; Klaus Wegner



Fuel, fertile material and/or absorber material containing particles for fuel and/or absorber elements in nuclear reactors are coated by a process comprising introducing thermally cleavable gases in the reaction space heated to above 1000 degrees C. of a fluidized bed unit with the help of a gas inlet nozzle cooled with a cooling medium and having an elongated inlet tube, decomposing the cleavable gases after leaving the nozzle, depositing the decomposition products on fuel, fertile material or absorber particles present