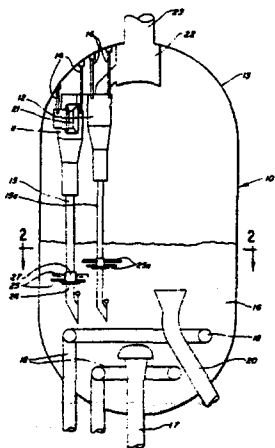


substantially lower in temperature from what exists at the furnace gas outlet of a conventional steam generator. Thus, outlet gas from fluidized bed combustors needs to be placed in the downstream gas path differently from conventional practice. The external combustors of the present invention permit placement of hot gas in the steam generator gas path where it can be effectively utilized. The invention also teaches how new steam generators can be configured advantageously to accommodate multiple fluidized bed combustors particularly as pertains to larger capacity steam generators in the 200 MW electrical and larger range.

4426212

BRACING ASSEMBLY FOR CYCLONE DIPLEGS IN FLUIDIZED BED UNITS

Harold D Zacher assigned to Standard Oil Company (Indiana)

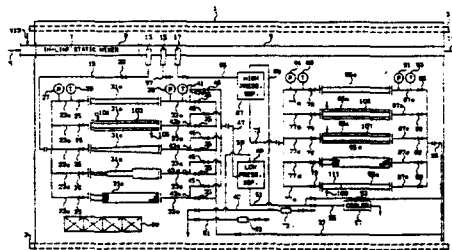


A bracing assembly for use in fluidized bed units having a number of cyclone separators equipped with diplegs is disclosed. The assembly comprises paired brace elements interconnecting adjacent diplegs to form a closed polygon whereby each dipleg in the polygon supports the others to eliminate sway or movement of the diplegs. The method of attachment of the brace elements is such as to accommodate large temperature differentials within the unit during operation and also between operation and shutdown without the creation of abnormal stresses. The assembly is particularly useful in the regenerator vessels of fluid catalytic cracking units.

4426880

METHOD AND APPARATUS FOR FLUID SAMPLING AND TESTING

John P Walters, Radomi Petrovich, Gregory C Daley, Donald C Harban assigned to Phillips Petroleum Company

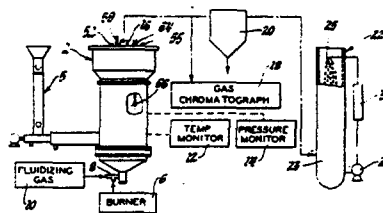


An apparatus for preparing and testing fluid samples in which a two-phase fluid mixture passes through equipment for homogenizing the mixture with at least one isokinetic sampling device arranged to remove portions of the homogenized fluid mixture, with the portions then being passed through testing equipment. Preferably, geothermal fluid is homogenized and samples are withdrawn by the isokinetic sampling device and tested for various properties of the fluid, particularly the formation of scale. The testing apparatus is adapted for on-site operation.

4426936

METHOD AND APPARATUS FOR DISPOSAL OF THERMOPLASTIC WASTE IN A FLUIDIZED BED REACTOR

Hong-Hsiang Kuo assigned to General Motors Corporation



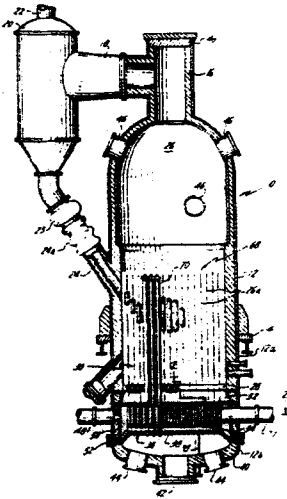
A fluidized bed reactor suitable for burning polymeric waste material, particularly thermoplastics, has been developed as well as a method of using it. The reactor comprises a chamber for retaining a fluidized bed of refractory particles and burning the polymer therein. A specially adapted diffuser plate located at the bottom of

the reactor controls the flow path of particles in the fluidized bed to enhance mixing and maintain uniform reactor temperatures. Means are additionally provided to introduce polymer particles into the reaction chamber in a controlled manner as well as ignition means to continuously ignite gases in the reactor, promoting the burning reaction. In accordance with the subject method, the bulk of the polymer waste is substantially reduced and useful heat energy is recovered.

4426958

FLUIDIZED BED COMBUSTOR AND COAL GUN-TUBE ASSEMBLY THEREFOR

William S Hosek, Edward Garruto assigned to
Curtiss-Wright Corporation



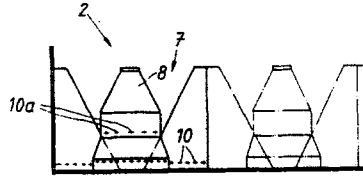
A coal supply gun assembly for a fluidized bed combustor which includes heat exchange elements extending above the bed's distributor plate assembly and in which the gun's nozzles are disposed relative to the heat exchange elements to only discharge granular coal material between adjacent heat exchange elements and in a path which is substantially equidistant from adjacent heat exchange elements.

4427364

FLUIDIZABLE BED COMBUSTION CHAMBER

Jorge Bergkvist, Finspong, Sweden assigned to
Stal-Laval Turbin AB

A fluidizable bed combustion chamber com-

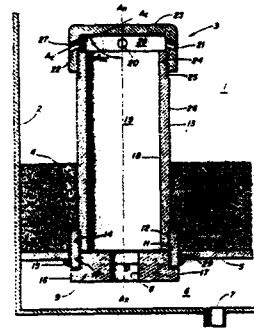


prises an intermediate partition (2,7) which divides the chamber into an upper combustion space (1a) and a lower plenum (1b) and which is provided with means (4,4a,8) for injecting fuel into the upper combustion space in which, during use of the combustion chamber, a bed of fluidized material (6) is created. The intermediate partition is composed of a plurality of nested modules (7), each of polygonal shape and having a substantially centrally positioned fuel supply member (8). Each corner surface (9) of each module is upwardly inclined in the direction away from the center of the module, and these corner surfaces are provided with openings (10) enabling air to be injected into the upper combustion space from the plenum chamber. Preferably, the modules are of regular polygonal shape, for example triangular, quadratic or hexagonal.

4429471

FLUIDIZED BED AIR DISTRIBUTOR

Stephen L Goodstine, Glen D Jukkola assigned to
Conoco Inc



Fluidized bed apparatus comprising a fluidized chamber having a grid plate below said chamber, a feed gas channel below said grid plate, and a fluidized bed gas distributor, said fluidized bed gas distributor comprising a nipple, a cap, and a bushing, wherein said cap is provided with at least one gas distribution passage, and said nipple includes a central nipple passage and said bushing includes a central bushing passage, said cap being attached to a first end of said nipple said bushing being attached to a second end of said nipple.