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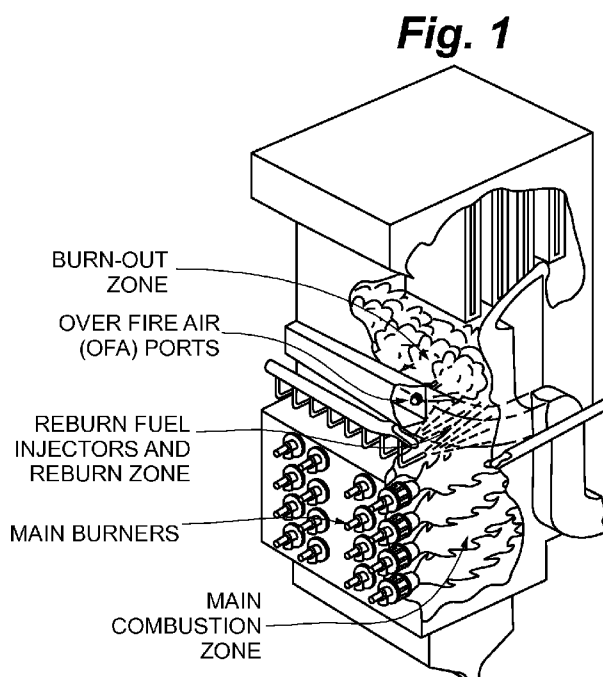
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(54) Title: NANO-DISPERSIONS OF COAL IN WATER AS THE BASIS OF FUEL RELATED TECFINOLOGIES AND METHODS OF MAKING SAME

(57) Abstract: Colloidal coal-in-water slurries having nano-particles of coal creating a pseudo-fluid. The colloidal coal-in-water slurry generally includes from about fifty to about seventy two weight percent of coal, with about 20 to about 80 percent of the coal having a particle size of about one micron or less with a mode particle size of about 250 nanometers. The coal-in-water slurry can also include a surfactant system containing one surfactant or mixtures of two or more surfactants, or mixtures of one or more surfactants and an inorganic or organic salt. The coal-in-water slurry can be used in low NO_x burner applications as the main fuel and/or the reburn fuel, in gasification processes as the input fuel either alone, or in combination with organic materials, in gas turbine applications, and in diesel engine applications.



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