

Multipollutant Control By Evaporative Cooling/Flash Drying Technology and Electrostatically Enhanced Fabric Filtration

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Recently demonstrated techniques of vertical duct flash drying have shown superior mass transfer for control of acid gases by lime addition. New concepts integrating evaporative cooling and flash drying promise to integrate mercury vapor control and pre-particle condensation/agglomeration with improved PM controls to give a compact, high-efficiency, low cost, Multipollutant emission control system. Each major pollutant group – NO_x, SO₂, filterable and condensable PM, mercury and MACT metals – may be controlled using variations and combinations of the technologies described.

Potential future applications of these new technologies with associated capital costs are presented for coal and mixed fuel boilers, waste incinerators, and metallurgical furnaces, with emphasis on advantages of retrofit of existing facilities.