

# Commercialization of Fired Paving Bricks with Class F Fly Ash from Illinois Basin Coals

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## ABSTRACT

The development and marketing of commercial fly ash-containing bricks would benefit; coal industry, utilities, and brick manufacturers by converting fly ash now being discarded into an economical ingredient for brick-making. With support from cooperation, from Illinois State government, and from federal government, this study furthered the initial commercialization process by helping brick manufacturers establish plant parameters for producing paving bricks containing fly ash. Class F fly ash from three different sources with one having significantly greater unburned carbon content were tested at a brick plant in Indiana. Four large pilot-scale extrusions and firings produced a total of 8,000 commercial-size paving bricks for evaluation. The bricks were made with 20 volume% fly ash balanced with the conventional (clay and shale) raw material normally used by the brick plant. The effect of mix's composition on the quality of the green extruded and fired products was examined. The produced bricks met ASTM standard specifications for pedestrian and light traffic paving brick.

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