

COAL ASH GENERATION AND UTILIZATION: A REVIEW

By Tarun R. Naik, and Shiw S. Singh

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ABSTRACT

This paper describes production and utilization of coal ash in many parts of the world. The utilization potential for coal ash generated from conventional as well as advanced coal combustion technologies are addressed. Constructive use options for coal ash are divided into three classes: low technology applications; medium technology applications; and, high technology applications. The low technology applications include the use of coal ash in fills and embankments, pavement and subbase courses, subgrade stabilizations, landfill cover, soil improvement, land reclamation, slurried flowable ash, and water pollution control. The medium technology applications include the utilization of coal ash in blended cements, lightweight aggregates, various types of concrete, precast/prestressed products, bricks, blocks, paving stones, artificial reefs, etc. The high technology applications involve the use of fly ash as a raw material for metal recovery, filler for metal matrix composites, polymer matrix composites, and several other filler applications.