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Complex Processing of Pulverized Fly Ash by Dry Separation Methods

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ABSTRACT

Pulverized fly ash (PFA) is produced about 500 billions tons every year in the world in a result of coals combustion. Most of the fly ash collected in power plants is disposed by deposition in landfills, situated as a rule near big cities with well developed infrastructure and high cost of land. Moreover, the pollution of environmental by fine solid wastes is inevitable and takes place in area of residing of a basic part of the population. The only solution is a complex processing of fine wastes with a production of value added materials. New conception of complex processing of PFA is proposed on the base of facilities of Electro-mass-classifier (EMC) and other techniques. The characterization of separated fractions was carried out by SEM and optic microscopy, XRD, laser diffraction, Mössbauer spectroscopy and other methods. A fine fraction of glass microspheres presents the main interest as filler in various materials.

KEYWORDS

Pulverized Fly Ash (PFA), Processing, Solid Wastes, Utilization, Dry Separation, Fly Ash Components, Glass Microspheres, Magnetospheres, Fillers, Electro-Mass-Classifier

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