CHARACTERIZATION OF FLY ASH BASED ON PHYSICAL AND CHEMICAL PROPERTIES

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ABSTRACT
Indonesia is the second largest coal producer in the world after China. This caused many power generation industry in Indonesia that use coal as fuel are numerous and the price is relatively cheap. But as the impact of coal use is increasing the quantity of fly ash in large numbers anyway. Fly ash is a coal combustion waste that can be used as a mixture of cement because of its ability to increase the strength of concrete. So there is need for studies to determine the properties of fly ash to facilitate in controlling the quality of fly ash.

At this final project will be known ways of processing fly ash performed Paiton power plant and spreading. According to ASTM C618, fly ash can be divided into three according to sources burning coal that is used when the class F, class C and class N. In the process, there are some things that should be reviewed to determine how well the quality of fly ash content of which is silicon dioxide, aluminum oxide, iron oxide, sulfur trioxide, moisture content, loss of ignition, fineness, etc.. The method used in this study is to interview the producers and consumers Paiton power plant, fly ash samples to be tested physically and chemically through the test XRF (X-ray fluorescent) and XRD (X-ray diffractometer), the manufacture of test specimens in the form of mortars and pastes and analysis of results.
From the experiments and test results of the above parameters will be known to the quality and type of fly ash fly ash from several manufacturers in Indonesia, how to know the quality of fly ash on physical properties, mechanical, and chemical properties of fly ash. factors that affect the quality of fly ash, chemical and physical properties of fly ash.

**Keyword:** fly ash, pozzolan, paiton, characterization