

# PEMANFAATAN ABU JERAMI SEBAGAI BAHAN TAMBAHAN SEMEN

## USING OF STRAW ASH AS ADDITIVE MATERIAL CEMENT

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### ABSTRACT

In this research, Portland cement type 1 made by using raw material clinker and gypsum from production unit in cement plant and also with adding straw ash from the combustion of straw rice plant, the adding of straw ash performed on a particular composition which is 0%, 5%, 8%, 12% and 15%. The purpose of the research is to know the effect of adding straw ash opposite the quality of Portland cement type 1 and to know about the best composition of adding straw ash to get Portland cement type 1 according with SNI-15-2049-2004. The benefits of the research are to reduce the level of environmental pollution and to increase the value of straw rice plant. Portland cement type 1 that has been created will be done some analysis to determine the quality of the cement, such as cement chemical composition analysis using X-Ray spectrometer, determination of free lime, determination of lost on ignition, determination of Blaine and determination of compressive strength mortar. So hoping the Portland cement type 1 that has been created is according SNI 15-2049-2009. The result of the research show that the all of adding straw ash is got cement with compressive strength, free lime disposal, loss on ignition disposal, and Blaine of cement according with SNI 15-2049-2009 with the maximum adding of the straw ash is 15 % where at this adding straw ash is got compressive strength equal 476 Kg/cm<sup>2</sup>, free lime equal 1, 01 %, loss on ignition equal 2, 78 %, and Blaine equal 6125 cm<sup>2</sup>/gr.

Key words: mortar, compressive strength, free lime, loss on ignition