IMMOBILIZATION OF ION Pb\(^{2+}\) BY SYNTHESIZED GEOPOLYMER OF FLY ASH PT. IPMOMI PROBOLINGGO

Name : Ria Akmalia Fitriani
NRP : 1408 100 079
Supervisor : Drs. M. Nadjib Mudjahid, MS.
Hamzah Fansuri, M. Si, Ph. D

ABSTRACT

Synthesis geopolymer of fly ash from PT. IPMOMI Probolinggo by varying solid/liquid, SiO\(_2\)/Al\(_2\)O\(_3\) mol ratio and immobilization of ion Pb\(^{2+}\) have been carried out. Synthesis carried out using varying total component of solid and liquid. The ratio of solid and liquid is 3.59 The highest of compressive strength is 33.70 Mpa. Synthesis of geopolymer by varying SiO\(_2\)/Al\(_2\)O\(_3\) by addition AlOH\(_3\) and using 3.59 as ratio solid and liquid. Immobilization the ion of heavy metal Pb by varying concentrate which are 1.000 ppm, 2.000 ppm, 4.000 ppm, 8.000 ppm, and 16.000 ppm have been carried out. The highest compressive strength can be reached by geopolymer which using addition 16000 ppm. The effectiveness of immobilization ion heavy metal will determined by ICP OES. Geopolymer using the ratio solid and liquid = 3.59; SiO\(_2\)/Al\(_2\)O\(_3\)=6.45 and by addition of ion heavy metal Pb being the high performance which leached by asetat acid = 0

Key words : Geopolymer, Heavy Metal, Immobilization, Leaching