**An Experimental Study on Mitigating Alkali Silica Reaction by**

**Using Lithium Hydroxide Monohydrate**

**Abstract.** The ASR suppression effect of lithium hydroxide monohydrate (LiOH.H2O) in mitigating ASR was evaluated

by both mortar bar and concrete prism test. JIS A 1146 was used to make mortar bars. Meanwhile, RILEM AAR-3 was used for casting concrete prisms. Reactive aggregates were used in pessimum proportion for mortar and concrete

mixtures. The results showed that concrete (L1) used reactive aggregates were immersed in 4M/l LiOH.H2O solution can reduce expansion. Then, concrete (L3) with reactive aggregates were covered with cement paste made with 4M/l

LiOH.H2O and were immersed in 4M/l LiOH.H2O solution can reduce expansion. Treatment of reactive aggregates with 4M/l LiOH.H2O the controlled room at 80oC for 5 days can reduce expansion for andesite-1, and at 80oC for 10 days can reduce expansion for andesite-2. The LiOH.H2O results showed that maximum absorption LiOH.H2O of coarse aggregates used andesite-2 = 1.75 mol/l at temperature 80oC. Then, the effective immersing period for passivation of aggregates was at day 7.