



Long-Term Durability Associated with Calcium Leaching from Cement Hydrate

We propose a computational system that can predict long-term degradation of cement hydrate due to calcium leaching. For simulating leaching of calcium ion, equilibrium of calcium ion in solid and liquid and ion transport are formulated on the basis of thermodynamics theory. The time-dependent material properties of cement hydrate are evaluated considering the inter-relationship of hydration, pore-structure development and moisture transport based upon fundamental physical material models.

