

Study on the pore structured model considering water diffusion depending on pore diameter

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Abstract

When estimating the durability of concrete structures, the development of water migration model taken the hydration reaction products caused by a hydration of unhydrated cement present in the pore into account is very important.

In this study, the model was developed by the extension of the model proposed by authors.

As a result, it is noted that a constant reaction rate of solid permeation rate was difficult to express the real phenomenon, as well as distinguish between hydration reaction and diffusion which is defined in the pore structure, the pore structural model prior to moisture content model was extended to a coupled reaction-diffusion of water.