عنوان مقاله:

Credibility Range of Dupuit-Forchheimer assumption in Steady Unconfined Flow to a Horizontal Drain

محل انتشار:

هشتمین کنگره بین المللی مهندسی عمران (سال: 1388)

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خلاصه مقاله:

The credibility range of Dupuit-Forchheimer assumption in prediction of steady-state flow to an infinite horizontal drain in an unconfined aquifer is studied by utilizing analytical element method together with Genetic Algorithm. The functionality of the flow rate in respect to different hydraulic head of the constant-head boundary, drain radius, drain elevation, and distance to the constant-head boundary is also studied. It is found that Dupuit-Forchheimer assumption is credible in the distances more than 1.8 times of drain elevation from the drain where the distance between the drain and the costant head is about 10-12 times of drain elevation.

کلمات کلیدی:

Analytical element method; Water table; Horizontal drain; Dupuit-Forchheimer; Genetic Algorithm

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