

ABSTRACT

Seepage causes weakening of levees and can cause levee failure or overtopping due to levee settlement. A numerical method, called the boundary fitted coordinate (BFC) method, was developed to determine seepage through a levee and the transient head on the seepage path due to the changing water level during a flood. The BFC transforms the physical coordinate system into a computational curvilinear coordinate system. The grid generated in this method accurately represents the boundary of the system regardless of its complexity.

Keywords: *BFC method, critical head, flood, free surface, levee, piping, seepage.*

ABSTRAK

Rembesan mengakibatkan kerapuhan sebuah tanggul dan bisa menyebabkan tanggul gagal atau melebihi batas kemampuan tanggul. Dalam metode numerik, disebut BFC atau boundary fitted coordinate, yang dikembangkan untuk menentukan rempegan melalui tanggul dan atasan tambahan dalam rembesan untuk mengubah tingkatan air selama banjir. BFC mentransformasi sistem koordinasi fisik melalui sistem koordinat komputasi kurvilinear. Kisi yang digunakan dalam metode ini merepresentasikan batasan kompleks system secara akurat.

Kata kunci: *metode BFC, critical head, banjir, lapisan bebas, tanggul, pipa, rembesan*