

Deformation Model Suggestion of Deep-dept Aquitard

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Abstract: Land subsidence model is an important part in research of land subsidence. And meantime study of aquitard deformation model is an important part in research of land subsidence model. Author analysed pore water type of deep depth aquitard and studied the deformation characters of the pore water type of deep depth aquitard, and understood the deformation mechanics of deep depth aquitard. Based on deformation mechanics analysis, non-Darcy flow was adopted to modify calculation model of land subsidence, and the authors put forward deformation model suggestion of deep depth aquitard. when pore water type is loosely bound water, authors advise to use Terzaghi consolidation equation modified by no-Darcy flow, and put forward the modified equation for deep depth aquitard deformation calculation; when pore water type is strongly bound water, authors advise to use elastic constitutive model to calculate deep depth aquitard deformation.

Key words: land subsidence; aquitard; non-Darcy flow; consolidation model

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