Ground Displacement Analysis Method for Chemical Grouting Capable of Estimating Fracturing Grouting Conditions

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With the increasing utilization of underground spaces, the demand for chemical grouting around existing structures has been rising. This makes the control of ground displacement during grouting operations increasingly important. Therefore, a numerical analysis method capable of estimating ground behavior prior to construction is required. This study extends a numerical prediction model, previously limited to permeation grouting, to include fracturing grouting. The proposed method is validated through comparison with the results of water injection tests. The final section presents the results of a parametric study using the proposed model.