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The Modified Upwind Finite Difference Fractional Steps Method for Compressible Two-phase Displacement Problem

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摘要 For compressible two-phase displacement problem, the

modified upwind finite difference fractional steps schemes are put

forward. Some techniques, such as calculus of variations,

commutative law of multiplication of difference operators,

decomposition of high order difference operators, the theory of

prior estimates and techniques are used. Optimal order estimates

in L^2 norm are derived for the error in the approximate

solution. This method has already been applied to the numerical

simulation of seawater intrusion and migration-accumulation of oil

resources.

关键词 [Two-phase displacement, two-dimensional compressibility, modified upwind finite difference fractional steps method, convergence](#)

分类号

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Abstract

Key words

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