A NONCONFORMING ANISOTROPIC FINITE ELEMENT APPROXIMATION WITH MOVING GRIDS FOR STOKES PROBLEM

摘要
关键词

分类号

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Abstract This paper is devoted to the five parameters nonconforming finite element schemes with
moving grids for velocity-pressure mixed formulations of the nonstationary Stokes problem in 2-D. We show that this element has anisotropic behavior and derive anisotropic error estimations in some certain norms of the velocity and the
pressure based on some novel
techniques. Especially through careful analysis
we get an interesting result on consistency error estimation,
which has never been seen for mixed
finite element methods in the previously literatures.

Key words   Stokes problem   Nonconforming finite element   Anisotropy   Moving grids   Error estimate.

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