BOX--LINE RELAXATION SCHEMES FOR SOLVING THE STEADY INCOMPRESSIBLE NAVIER--STOKES EQUATIONS USING SECOND--ORDER UPWIND DIFFERENCING

摘要
关键词

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Abstract We extend the SCGS smoothing procedure (Symmetrical Collective Gauss--Seidel relaxation) proposed by S.~P.~Vanka$^{[4]}$, for multigrid solvers of the steady viscous incompressible Navier--Stokes equations, to corresponding line--wise versions. The resulting relaxation schemes are integrated into the multigrid solver based on second--order upwind differencing presented in~[5]. Numerical comparisons on the efficiency of point--wise and line--wise relaxations are presented.

Key words

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