

The Coupling Method with the Natural Boundary Reduction on an Ellipse for Exterior Anisotropic Problems

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Summary

This paper investigates the coupling method of the finite element and the natural boundary element using an elliptic artificial boundary for solving exterior anisotropic problems, and obtains new error estimate that depends on the mesh size, the location of the elliptic artificial boundary, the number of terms after truncating from the infinite series in the integral. Numerical examples are presented to demonstrate the effectiveness and accuracy of this method.

