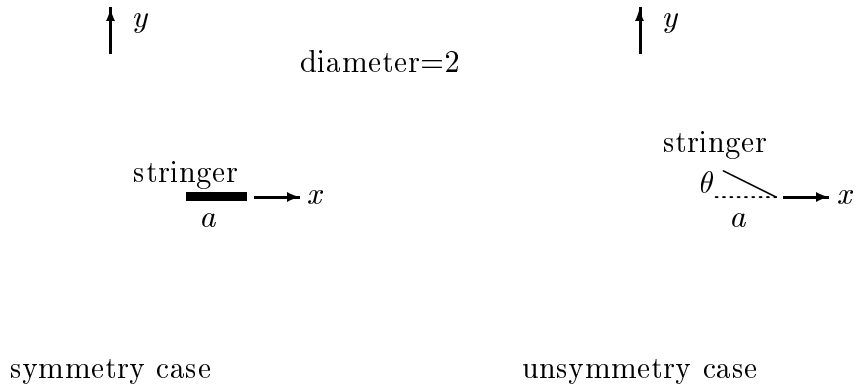


邊界元素法1998 第十三次作業



1. The eigenvalue problem

$$\nabla^2 u(\mathbf{x}) + k^2 u(\mathbf{x}) = 0, \mathbf{x} \in D$$

with boundary condition

$$u(\mathbf{x}) = 0, \mathbf{x} \text{ on the boundary}$$

2. By discretizing the circular boundary into N elements, $2M$ elements on crack boundary of orientation angle θ with crack length $a = 1.0$ (two on the upper crack line, the other two on the lower crack line), determine the first three critical wave numbers and the corresponding modes. by using DUALHAK program developed by MSV Lab. in NTOU.

3. Plot the determinant of $[U]$ and $[\bar{L}]$ versus k and determine the former three eigenvalues.

4. Contour plot for the former three eigenmodes.

References

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