程式10 ACOUSTICS by Dual BEM

(a)　　　　　　　　　　　(b)　　　　　　　　　　　(c)
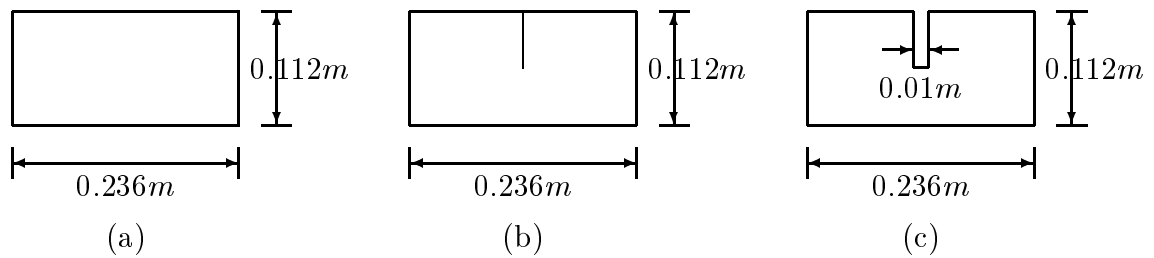
1. Problem statement:

   $G.E.$:　　$(\bigtriangledown^2 + k^2)p(x,y) = 0,$　　　　$(x,y) \in D$

   BC:　　$\frac{\partial p}{\partial n} = 0,$　　　　　(x,y) on the boundaries

   where $k = \frac{\omega}{c}$.

2. Fill in the acoustic frequencies in following table

Mode no.	(a)	(b)	(c)
1			
2			
3			
4			
5			
6			

3. Please show

   (1). BEM mesh

   (2). Pressure contour for acoustic modes

   (3). 3-D plot for pressure of acoustic modes

References

[1] J. T. Chen and K. H. Chen, 1998, Dual integral formulation for determining the acoustic modes of a two-dimensional cavity with a degenerate boundary, Engineering Analysis with Boundary Elements, Vol.21, No.2, pp.105-116. (SCI and EI)

[2] 陳桂鴻、陳正宗與劉德源，1998，含不完全隔間聲場之對偶邊界元素分析，力學期刊，第十四卷，第二期，頁 1-11。

[3] J. T. Chen, M. T. Liang, I. L. Chen, S. W. Chyuan and K. H. Chen, 1999, Dual boundary element analysis of wave scattering from singularities, Wave Motion, Vol.30, No.4, pp.367-381. (SCI and EI)