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### **Discussion on the validity domain of SEA**

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This paper is concerned with the validity domain of SEA which is defined in terms of four criteria. The mode count  $N$  and the modal overlap  $M$  must be high, the normalized attenuation factor  $m$  and the coupling strength  $\gamma$  must be small. The application of the dimensional analysis on the governing equations of plates gives the space of dimensionless parameters in which the validity domain of SEA must be delimited. This domain is discussed on the basis of the geometric properties of the surfaces delimiting it. The diagrams of validity of SEA are introduced and proposed as a tool for a practical use of SEA.