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A new model for thin plates with rapidly varying thickness. II: A convergence proof. (English)

[Zbl 0565.73046](#)

Q. Appl. Math. 43, 1-22 (1985).

[For part I see Int. J. Solids Struct. 20, 333-350 (1984; [Zbl 0532.73055](#)).]

A model for thin plates with rapidly varying thickness is presented. Three different length scales of variation are considered. It is shown, that the case of long scale variation is an asymptotic limit of the intermediate case. Moreover a convergence theorem for the last case is given, showing that the model in the limit represents the three-dimensional elasticity equations. The paper is of theoretical interest and has no direct relation to practical problems.

Reviewer: [W.Schnell](#)

MSC:

[74K20](#) Plates

Cited in **3** Reviews
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Keywords:

rapidly varying thickness; Three different length scales of variation; long scale variation; asymptotic limit of the intermediate case; convergence theorem; three-dimensional elasticity equations

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