

ENGLISH SUMMARY

ON ADAPTIVITY AND POSTPROCESSING OF DISPLACEMENT QUANTITIES IN MIXED FINITE ELEMENT METHOD

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A simple adaptive procedure has been studied in the case of a thin beam model problem. Also, a postprocessing scheme for displacement quantities, performed separately on each element, is tested numerically.

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LINE-SPRING METHOD

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The line-spring -technique is an interesting method for the assesment of part-through surface cracks in plate and shell structures. In the method, a part through surface crack is idealized as a through-wall crack with a series of springs across the crack faces. The series of the springs can be described as a 'line-spring'. The stiffness of the 'line-spring' is distributed continuously on the crack faces and it is derived using the model of a single-edge-notched (SEN) specimen with a plane strain condition. The method can also be applied in the elastic-plastic regime.