

ENGLISH SUMMARY

ON THE EFFECT OF THE FINITE ELEMENT MESH IN THE OPTIMIZATION OF THE PLATE STRUCTURES

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In this article it is studied which kind of finite element mesh is suitable for the structural optimization. If the mesh is too coarse, then the accuracy of the FE-analysis is poor and, if the mesh is too dense, the accuracy is good but the calculation time is very long. One multicriterion plate example is calculated with three different meshes. The main result of this research is that more than one element in the design variable area are needed to secure good accuracy of the calculation and the reliable optimization results.