

## عنوان مقاله:

Bending of a thin rectangular plate under the transverse load Using ANSYS Mechanical APDL

## محل انتشار:

چهارمین همایش بین المللی مهندسی مکانیک، صنایع و هوافضا (سال: 1399)

تعداد صفحات اصل مقاله: 6

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## خلاصه مقاله:

Generally, we define a thin plate as a sheet of material which thickness is small comparing with its other dimensions. Most of the engineering structures in different industries comprise using sheets which are supposed to bear various kinds of loading specially out of plane loads. For each researcher engineer it is self-evident that the more accurate analysis of the plates, more benefits of the mechanical design would gain. In this study particularly we shall investigate the effect of the transverse loading-known as distributed pressure and support conditions on the small deflection of a rectangular thin plate. For this focused case, we can solve the problem with two different methods which are an exact theory and energy method. In this study we shall use the exact theory which is based on the solution of a differential equation, which was presented and solved by Navier. At the following the finite element analysis is done in order to compare the results of a thin rectangular plate with simply supported edges under the effect of transverse load with the theoretical colorations

## کلمات کلیدی:

Thin plate, Bending, Transverse load, ANSYS

## لینک ثابت مقاله در پایگاه سیویلیکا:

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