

## عنوان مقاله:

Limit angular speed and onset of yield for FGM rotating disks based on von Mises yield criterion

## محل انتشار:

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## خلاصه مقاله:

This article presents a parametric analysis for purely elastic analysis of rotating disks made of functionally graded materials (FGMs). The solution is based on von Mises yield criterion. The material properties, except Poisson's ratio, are assumed to vary as power function across the thickness direction. To the best of authors' knowledge, in previous researches which onset of yield is investigated, variation of material density is ignored, while density is not constant in FGM rotating disks. Elastic-limit angular speeds and partially elastic deformations are investigated. The profiles are plotted for different values of the inhomogeneity constant for the radial displacement, radial stress, and circumferential stress, as a function of radial direction.

## کلمات کلیدی:

rotating disk, limit angular speed, onset of yield, functionally graded material (FGM), von Mises

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/800254>

