

## عنوان مقاله:

THERMAL BEHAVIOR ANALYSIS OF THE FUNCTIONALLY GRADED TIMOSHENKO'S BEAM

## محل انتشار:

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## نویسندگان:

GH. Rahimi - is with the Department of Mechanical Engineering, Tarbiat Modares University, Jalal-e-AI-e-Ahmad Exp.  
.Way, Tehran, Iran

AR. Davoodinik - is a PhD student at the same Department

## خلاصه مقاله:

The intention of this study is the analysis of thermal behavior of functionally graded beam (FGB). The distribution of material properties is imitated exponential function. For thermal loading the steady state of heat conduction with exponentially and hyperbolic variations through the thickness of FGB, is considered. With comparing of thermal behavior of both isotropic beam and FGB, it is appeared that the quality of temperature distribution plays very important part in thermal resultant distribution of stresses and strains for FGB. So that, for detecting the particular thermal behavior of FGB, the function of heat distribution must be same as function of material properties distribution. In addition, In the case of exponential distribution of heat with no mechanical loads, in spite of the fact that the bending is accrued, the neutral surface does not come into existence.

## کلمات کلیدی:

Timoshenko's beam, exponentially distribution, functionally graded material, thermal behavior

## لینک ثابت مقاله در پایگاه سیویلیکا:

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