

## عنوان مقاله:

Saint-Venant Torsion of Non-homogeneous Anisotropic Bars

## محل انتشار:

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## خلاصه مقاله:

The BEM is applied to the solution of the torsion problem of non-homogeneous anisotropic noncircular prismatic bars. The problem is formulated in terms of the warping function. This formulation leads to a second order partial differential equation with variable coefficients, subjected to a generalized Neumann type boundary condition. The problem is solved using the Analog Equation Method (AEM). According to this method, the governing equation is replaced by a Poisson's equation subjected to a fictitious source under the same boundary condition. The fictitious load is established using the Boundary Element Method (BEM) after expanding it into a finite series of radial basis functions. The method has all the advantages of the pure BEM, since the discretization and integration are limited only on to the boundary. Numerical examples are presented which illustrate the efficiency and accuracy of the method

## کلمات کلیدی:

Anisotropic materials, Non-homogeneous media, Elasticity, Bars, Torsion

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/589189>

