

Scientific research by Dr. Waad Samir Attia - Faculty of Engineering, National - Private University

Scientific research title:

Schafer vector method for the general traditional mathematical model of the second axially symmetric state of the elastic strain of the micropolar elastic solid

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Abstract:

The paper relates to the mathematical model of the centro-symmetric, homogeneous, and isotropic micropolar elastic solid of 5 material constants in the second axially symmetric state of elastic strains, discussed by Nowacki [5] and with Erigen [6], and shortly called (E-N:5). First, we introduce the following:

- 1) The traditional model of such a body in frame of the second axially symmetric state of elastic strains.
- 2) The displacement- rotation model of the above mentioned body.
- 3) The Schafer vector method for the displacement rotation initial-boundary value problem of the above mentioned micropolar elastic solid.

In paper ,first we generalized the Schafer vector method to the traditional (general) description of the considerable body in the frame of the second axially symmetric state of elastic strains. Finally ,we end the paper by some problems for discussing

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