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A spherical dome in the temperature field

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Abstract

An exact solution of the uncoupled three-dimensional thermoelasticity problem for a spherical dome (hangar) is constructed. Displacements and stresses in the structure are determined as two-fold series with respect to solid spherical harmonics and trigonometric functions. © 2013 Allerton Press, Inc.

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Keywords

boundary conditions, displacements, series, solid spherical harmonics, stresses, thermal conduction, thermoelasticity