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HYPOTHETICAL ANALYSIS OF THERMAL STRESS DUE TO FRACTIONAL HEAT DISTRIBUTION AND WITHDRAWAL OF HEAT SUPPLY IN A THICK CIRCULAR CYLINDER

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Abstract

In this paper, we consider a short length thick circular cylinder and discus the thermoelastic problem. In order to develop the analysis for the temperature field, we introduce the method of generalized finite Hankel transform and finite Fourier transform. The solution are obtained in a series form in terms of Bessel's functions and illustrated numerically. Some numerical results are shown graphically.

Key Words : *Transient, Thermoelastic problem, Partially distributed heat, Thermal Stresses.*