1125-VC-763 Kulwinder Singh* (kbgill1@gmail.com), India, and Rajneesh Kumar. Stresses in Micropolar thermoelastic Elastic Solid due to Ramp-type increase in Thermal and Normal Loading.

This article deals with the study of thermoelastic interactions of fractional order theories in micropolar elastic solid, whose boundary is subjected to (i) ramp-type heating (ii) ramp type normal loading. The generalized theories of thermoelasticity of integer and fractional order with one relaxation time are used to investigate the problem. After developing a mathematical model, Laplace and Fourier transform have been used to find a common solution corresponding to different theories. The inversion of transforms is obtained numerically and results obtained are compared graphically. Some particular cases of interest are also deduced from the present study (Received September 11, 2016)