LIST OF SYMBOLS

u_i	Components of displacement vector
e_{ij}	Components of strain tensor
$e_{ii} = e$	Dilatation
σ_{ij}	Components of stress tensor
q_i	Components of heat flux vector
θ	Temperature above the reference temperature
θ_0	Reference temperature
b_i	Components of the body force vector
h_i	Components of the body force per unit mass
r	External heat source
ϖ	Heat source per unit mass
ρ	Mass density of the material
S	Entropy per unit mass
S_0	Initial Entropy
k	Thermal conductivity of the material
k^*	Rate of thermal conductivity of the material
c_E	Specific heat at constant strain and volume

C_S	Specific heat at zero stress
λ, μ	Lame's elastic constants
α_t	Coefficient of linear thermal expansion
C_{ijkl}	Elasticity tensor
$\beta = (3\lambda + 2\mu)\alpha_t$	Thermoelasticity constant
τ_q	Phase-lag of heat flux vector
τ_T	Phase-lag of temperature gradient
τ_v	Phase-lag of thermal displacement
δ_{ij}	Kronecker delta
$\delta(.)$	Dirac delta function
∇	Gradient operator
$\nabla^2 = \Delta$	Laplacian operator

Throughout the thesis, the subscripted comma notations are used to represent the partial derivatives with respect to the space variables.

The over-headed dots denote partial derivatives with respect to time variable, t.

Subscripts i, j, k take the values 1, 2, 3 and summation is implied by index repetition.