

NOMENCLATURE

a: thermal diffusivity (m^2/s)
C: coefficient
 C_d : discharge coefficient
 C_p : specific heat ($J/Kg K$)
g:gravitational acceleration (m / s^2)
 G_r : Grashof number
Gz: Graetz number
H : height (m)
 h_c : convective coefficient ($W / m^2 K$)
T:temperature (K)
 T_∞ : fluid temperature (K)
 T_0 : Initial temperature (K)
Q: Heat (J)
 \dot{Q} : Heat flow rate (W)
K :thermal conductivity ($W / m K$)
M : exponent
 N_u : Nusselt number
Pe: Pecklet number
Pr : Prandtl number
Ra : Rayleigh Number
Re: Reynolds number
v:air velocity (m / s)
V : volume flow rate (m^3 / s)

Greek symbols

ν :Kinematic viscosity of air (m^2 / s)
 β : coefficient of thermal expansion of air ($1 / K$)
 ρ : density of air (Kg / m^3)
 ΔT : temperature difference (K)
 ε : emissivity
 σ : Stephan Boltzman constant