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Nomenclature

A_b	Area of basin (m^2)
A_g	Area of glass cover (m^2)
C	Thermal capacity($J/m^2/K$)
C_p	Specific heat(J/kg/K)
D	Thermal diffusivity(m^2/s)
$\dot{E}_{x_{in}}$	Exergy input from sun (W)
$\dot{E}_{x_{cw}}$	Upward exergy flow rate by convection (W)
$\dot{E}_{x_{ew}}$	Upward exergy flow rate by evaporation (W)
$\dot{E}_{x_{rw}}$	Upward exergy rate by radiation (W)
$\dot{E}_{x_t}$	Total upward exergy flow rate with in solar still (W)
F_{ex}	Fraction of evaporative exergy
F_{cx}	Fraction of convective exergy
F_{rx}	Fraction of radiative exergy
Gr	Grashof number
g	Gravitational acceleration (m^2/s)
h_{cw}	Convective heat transfer coefficient from water surface to glass cover (W/m^2K)
h_{cw}	Evaporative heat transfer coefficient from water surface to glass cover (W/m^2K)
h_{fg}	Latent heat of vaporization (J/kg)
h_{rw}	Radiative heat transfer coefficient from water surface to glass cover (W/m^2K)
h_{1w}	Total heat transfer coefficient from water surface to glass cover (W/m^2K)
$I_s(t)$	Solar radiation on the glass cover of solar still (W/m^2)
K	Thermal conductivity (W/m K)
L	Characteristic length scale of convection
m_d	Distillate output

Nu	Nusselt number
P_g	Partial vapor pressures at inner glass cover temperature (N /m^2)
Pr	Prandtl number
P_w	Partial vapor pressure at water surface temperature (N /m^2)
$\dot{q}_{ew}$	Rate of evaporative heat transfer within still from water to glass cover (W)
T_a	Ambient temperature (K)
T_g	Inside surface temperature of glass cover (K)
T_s	Sun temperature (K)
T_w	Water temperature (K)

Greek symbols

σ	Stephan Boltzman constant (5.6697×10^{-8} W /m^2 K^4)
η_e	Energy efficiency
ε	Exergy efficiency
ε_i	Instantaneous exergy efficiency