μ	Dynamic viscosity (m^2/s)
ν	Kinematic viscosity (kg/ms)
ρ	Density (kg/m^3)
σ	Stefen Boltzman Constant (5.67 x 10^{-8} W/m^2K^4)
ε	emissivity
θ	Inclination angle (degrees)

Subscripts

a	air
atm	atmosphere
b	basin
c	convection
e	evaporation
es	energy storage
equ	equivalent
g	glass
r	radiation
w	water

APPENDIX A

A.1.1. Estimation of variable *f(t)* and *a*

The values of f(t) and a are estimated using [29],

$$f(t) = I'(t)\tau_g\alpha_w + \left[\frac{I'(t)\tau_g\tau_w\alpha_b + U_bT_a}{\left(1+\frac{U_b}{h_1}\right)}\right] + \left[\frac{I'(t)\alpha_g + h_{rgs}T_s + h_{cga}T_a}{\left(1+\frac{h_3}{h_2}\right)}\right]$$

$$a = \left[\frac{h_1U_b}{h_1+U_b}\right] + \left[\frac{h_2h_3}{h_2+h_3}\right]$$

A.1.2. Estimation of value of constant variable s_1, s_2, s_3 *and* s_4 for determining specific heat capacity of saline water

The values of s_1, s_2,s_3 and s_4 are calculated using [30],

C The seawater specific heat at constant pressure

C_P=J/kg K

$$s_1 = 4206.8 + 6.6197Y + 1.2288\times10^{-2}Y^2$$
$$s_2 = -1.1262 + 5.4178\times10^{-2}Y - 2.2719\times10^{-6}Y^2$$
$$s_3 = 1.2026\times10^{-2} - 5.5366\times10^{-4}Y + 1.8906\times10^{-6}Y^2$$
$$s_4 = 6.8874\times10^{-7} + 1.517\times10^{-6}Y - 4.4268\times10^{-9}Y^2$$

where Y is the salinity level in water.