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#### **ABBREVIATIONS**

collector area, (m<sup>2</sup>) Aconstant value constant value constant value of benefit-cost B/C Ratio constant value, (1.52 W.m<sup>-2</sup>.K<sup>-1</sup>)  $a_1$ constant value, (0.0085 W.m<sup>-2</sup>.K<sup>-1</sup>)  $a_2$ Coefficient of Performance COPheat capacity of a substance (kJ.kg<sup>-1</sup>.K<sup>-1</sup>)  $C_{P}$ tilt solar irradiation, (W.m<sup>-2</sup>)  $G_{\beta}$ internal rate of return, (%) IRR Life Cycle Cost Analysis, (Baht) LCCA flow rate of a substance (kg.s<sup>-1</sup>) m the period of payment, (Years) net present value, (Baht) NPV payback period, (Years) PB heat flow rate at absorber, (kW)  $\dot{Q}_{ab}$ heat flow rate in use of LPG, (kW)  $\dot{Q}_{auxiliary}$ heat flow rate at collector, (kW)  $\dot{Q}_{collector}$ cooling capacities, (kWh)  $Q_{cold}$  $\dot{Q}_{cond}$ heat flow rate at condenser, (kW)  $\dot{Q}_{evap}$ heat flow rate at evaporator, (kW) heat flow rate at generator, (kW)  $\dot{Q}_{gen}$  $\dot{\mathcal{Q}}_{in}$ heat flow rate inlet the component, (kW)

 $\dot{Q}_{loss}$ 

heat loss flow rate via the component, (kW)

## ABBREVIATIONS (CONT.)

 $\dot{Q}_{out}$  = heat flow rate outlet the component, (kW)

 $\dot{Q}_{rej}$  = total heat flow rate rejected to the environment, (kW)

 $\dot{Q}_{storage}$  = heat flow rate at hot storage tank, (kW)

SLCCA = Specific Life Cycle Cost Analysis, (Baht. kWh<sup>-1</sup>)

 $SOLF_{the}$  = fraction of the solar energy

 $\eta_0$  = constant value, (0.717)

 $\eta_{storage}$  = efficiency of hot water storage tank

 $\Delta T$  = differential temperature (K)

 $\beta$  = constant value

 $\alpha$  = constant value