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**An Experimental Study of Different Thermal Boxes Heated by Solar Thermal Radiation for Hot Water System at Night**

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**Abstract.** This research is related to thermal efficient water heating system, specifically to improve the water heating system that exists nowadays. The goal of this research is to improve the current water heating system by using solar heat as the energy source to heat the water. The focus is to improve the thermal efficiency by adding different thermal boxes as the absorber bed. By implementing the black body and radiation concept, the air trapped in the box is heated. The trapped air then increases the collisions between the molecules and directly increases the temperature inside the box, higher than the outside environment. Based on night experimental results revealed steel thermal box is better to be used for tropical weather like Malaysia.